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BEDDOES

ON

C O N S U M P T I O N,

R DIGITALIS,

AND

SCROPHULA.

OBSERVATIONS

ON THE

MEDICAL AND DOMESTIC MANAGEMENT

OF

THE CONSUMPTIVE;

ON THE POWERS OF

R

DIGITALIS PURPUREA;

AND ON

THE CURE OF SCHROPHULA.

BY

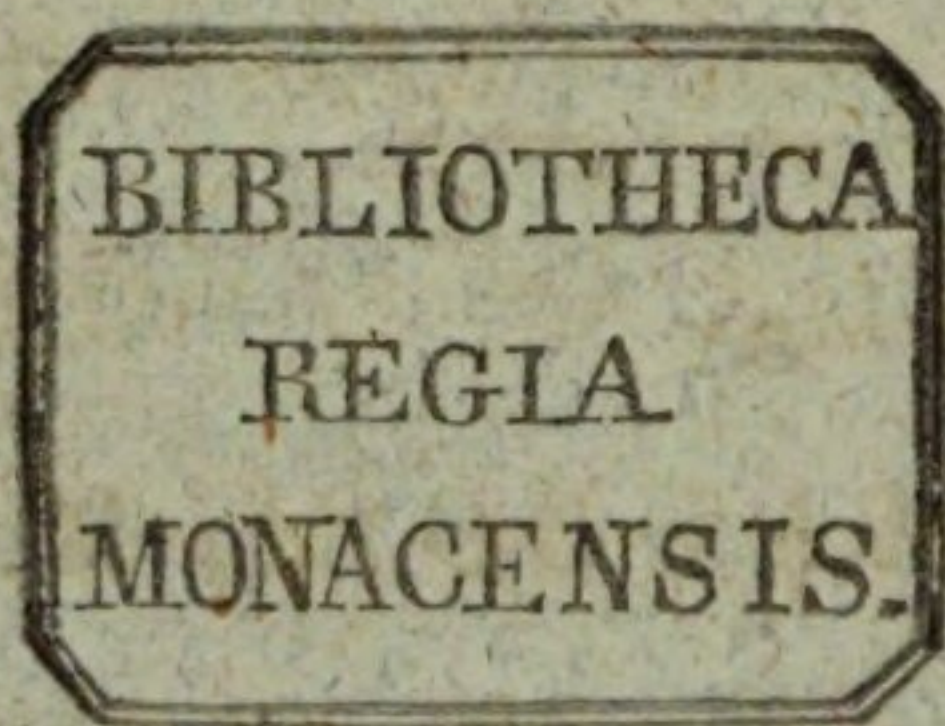
THOMAS BEDDOES, M.D.

LONDON:

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1801.



ADVERTISEMENT.

THE slightest acquaintance with our most modern medical literature is sufficient to shew that the attention of the practitioners of physic has been, of late years, excited in an extraordinary degree towards the cure of consumption. An accurate comparison of testimonies will, I believe, convince the impartial examiner that this care has not been bestowed in vain ; and he who resorts to

experience, and has opportunity to observe all the gradations of phthisis from the first distinct appearances of enlarging tubercles to the last stage of pulmonary ulceration, will be convinced that the practice, which has been recommended by the author of the following Observations in common with other physicians, is highly efficacious both in producing the diminution of suffering, where it cannot preserve life, and in preserving life, where every other method would be unavailing.

The proofs of this assertion are daily accumulating; and the number of the sceptical is, I apprehend, daily lessening. The voice, however, of staunch contradiction is not unfrequently heard. In spite of the fullest and most accurate reports, confirmed by the judgment of more

than one medical practitioner, and authenticated by the name of the patient, we find anonymous writers venturing to pronounce that *there is as yet no evidence of any cure of confirmed consumption*. An anonymous writer is good for nothing as a witness. He has no other way of invalidating testimony, but by shewing the inconsistency between the circumstances of the narrative themselves, or between those circumstances and the deduced opinion. But although this has not been even attempted, it is probable that the wide circulation of certain periodical publications, in which these hazarded decisions may be read, has rendered them mischievous.

For the treatment of consumption, however, a great deal more remains to be done than to add to the mass of unexcep-

tionable evidence, lately produced. No uniform method, and no single medicine is capable of effecting a cure in all the cases, referred to any one denomination of disease. If this were not directly proved by experience, it might be inferred from that endless diversity in the susceptibility to first impressions and in secondary or associated motions, which may be observed in different individuals. This will be a standing reason for seeking substitutes and auxiliary means in medicine, till the promise of that happy uniformity, by which some have ventured to footh the present miseries of our afflicted and unequal race, shall be realized.

In phthifical complaints, difference of constitution has peculiar influence upon the event. These complaints affect all classes, though not all in equal propor-

tion. And *that class, among which their victims have hitherto been the most numerous will probably be that in which the treatment, lately so much canvassed, will, when unassisted, most frequently fail.* Upon those whose experience is large enough to put this proposition to the test, partial success, if they find it true, should operate only as an incentive to more strenuous endeavours.

In these endeavours we must follow some sort of analogy. Hence I considered it as useful to investigate the powers of digitalis, which, with regard to the inhabitants of this island is becoming nearly the most important article of the *Materia Medica*. The reader will find that I have endeavoured to bring a variety of facts to bear upon the question concerning its operation, which hitherto

has been much too superficially considered, however confidently it may have been pronounced upon. I hope I have in some measure succeeded in fixing its medicinal character. Let me, however, be understood as saying this in relation to the dimness of our views in directing remedies and the grossness of our conceptions concerning their virtues. Those who with sufficient knowledge of inorganic philosophy have steadily contemplated the animal machinery, must be satisfied of our incompetence to any thing better than remote conjectures concerning organic action. Of course, we can have no clear connected acquaintance with the nature of any disease or any medicine.

What I have to say on scrophula, not appearing in the form of consumption, is

simply practical. I write in recommendation of a remedy, neither discovered by myself nor unknown to medical, particularly foreign, authors, but certainly not sufficiently valued in this country. I shall of course be desirous to learn how it succeeds with my brethren, but I confess I shall not wait for their reports with any great anxiety. The article in question requires much less patience in its administration than digitalis : and I have found it in a considerable number of the most unpromising cases one of the most certain of remedies. I expect therefore that it will be allowed to take its station in the *Materia Medica* with little opposition. Where it fails, we may have recourse to various substitutes, strictly analogous.

I consider it as a great advantage that

I have been so often permitted to name the persons whose cases I describe.

In the *sciences*, an examination, proceeding upon fixed principles, and very often internal evidence alone, is sufficient to determine the value of matter newly offered to the public. But in medicine, in which the facts are incapable of arrangement, and which is consequently no science, extraneous marks of authenticity are equally desirable to reader and writer. It is therefore worth while to observe, that although in all the following instances the author exercised his judgment respecting the nature of the complaint, in none scarcely did he stand single ; and, most commonly, several medical men had seen the patient, and were perfectly agreed concerning this particular.

I did not find it easy to separate what is designed for different readers. The unprofessional may consider part of the following pages as an appendix to my Essay on Consumption. I was not indeed extremely sollicitous to make such a separation. The better people are informed concerning medical practice, the less will they intermeddle : the less frequently also will they be the dupes of the crafty and inert part of the faculty, and the more readily will they co-operate with those, who, spare neither their faculties nor their credit in behalf of the sick.

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CONSIDERATIONS
ON A
MODIFIED ATMOSPHERE,
IN
CONSUMPTIVE CASES.

THE effects of temperature, though important in all diseases, and, in some, of primary importance, have hitherto received but slight attention. Of course, the means of applying heat and cold, generally or partially, have been very imperfectly provided for medical use. This fatal negligence will continue till public

opinion, grown more enlightened, shall oblige medical practitioners, in a much greater degree than is at present customary, to forego ease or emolument in consideration of the advantage of the sick. The physician (whose profession, as it is sometimes carried on, is the laziest of all possible occupations) receives his fee just as well without troubling himself about any operose regulations. The apothecary has not yet invented the art of *dispensing* heat and cold *. The friends of

* No college of physicians has yet enjoined an ice-house as a necessary appendage to the apothecary's shop; though the public might advantageously forego a considerable proportion of the rare exotic articles in any existing pharmacopœia for the sake of so vulgar a domestic production as ice. When men are better instructed in the laws of their own nature, they will be less eager about ice as a luxury than as a powerful in-

invalids are not unfrequently unapprised of the importance of these measures ; or they are indolent or parsimonious, or disposed to consider every thing, not comprehended within the ordinary routine of practice, with aversion.

When any beyond mere household means, which are seldom originally provided with much regard to the accommodation of the sick, are to be employed for the regulation of temperature, it is obvious that the consent of the friends must be obtained. There is another reason for wishing *them* to have a conviction of the utility of such attentions. The superinten-

strument of health. Public ice-houses will be constructed in our cities, towns, and villages. Had ice been at hand and properly used during the burning summer of 1800, many of those who were cut off by liver and bowel diseases would have escaped unhurt.

dance of the means must in great measure be confided to them : and where he does not meet with intelligent co-operation, much more where he is counteracted, the physician will seldom find his best endeavours in slow and dangerous diseases succeed.

The history of the small-pox affords one very striking example of the necessity of attending to the state of the atmosphere. Sydenham has a remarkable observation, tending to shew the utility of avoiding the heat of the bed-clothes in pleurisy : and whoever will steadily pursue the cold regimen in inflammations of the chest, and probably in all others, will find his care well rewarded. Two of my medical friends, without communication, have ascertained that a rheumatic fever such as is imperfectly cured by sudorifics

in several weeks, yields in two or three days to cold. During the present war, the ablest physician* in the service of the

* Dr. J. F. L. Lentin, (*Medizinische Bemerkungen auf einer Reise*, Berlin, 1800.) after mentioning the excellent regulations voted for the French hospitals, and the wretched state into which they fell under Robespierre, adds: "Notwithstanding all these wants
 " and hindrances, the Mentz hospital is distinguished
 " by the order that is preserved in it, and by the
 " excellent treatment of the sick. This is, however,
 " solely to be ascribed to the worthy physician in
 " chief. The genius of Wedekind, which is fully
 " adequate to such an institution, supplies what is
 " wanting, regulates the whole, animates those who
 " are subordinate to him with his own spirit, sets aside
 " all obstacles, and secures to the sick attendance
 " and succour."— "He was treating rheuma-
 " tism with cooling means; and ascertained, that pa-
 " tients of this description found themselves well in a
 " very cold air, and even in a draught of air. . . . The
 " success of his method was striking upon the whole.
 " Most patients were, in a few days, in a state of con-
 " valescence." ss. 13. 19.

French republic, at least among those who are publicly known, has been accustomed to place his rheumatic patients with advantage in a stream of air. Within the last twenty years, a remedy for fever, which was before an entire desideratum, appears to have been found in the application of cold to the surface of the body. In time, the proper graduation of this remedy will be discovered, so as to adapt it to all the variety of cases.

In consumption, the effect of temperature is not doubtful. Steady warmth creates an exemption in favour of those who would become its prey in a variable climate. The diversity of our own seasons makes a difference in the frequency of the disease*. Casual observation evinces, that

* Essay on consumption. Ed. 2d. pp. 22—32.

in many instances the cough is much aggravated on respiring a colder air. A persuasion has long prevailed, that residence in hotter countries is beneficial to British invalids ; and the principle seems perfectly just, though in fixing their destination it appears to be most grossly misapplied.

These considerations have induced the author to pay all the attention, he was allowed to pay, to temperature ; but he has never dared to trust his phthifical patients to warmth alone ; hence he has none of those pure experiments to relate which are so desirable, but so difficult to obtain, in medicine. In the course of his observations, however, the effect of temperature was sufficiently distinct.

I shall first describe the few cases in which the sole or principal reliance was placed

upon heated and otherwise modified air. In daring to commit narratives of this cast to the press, I feel that I am preparing a feast for those who resort to ridicule, if not as the test of truth, yet as the supreme delight of rational and immortal minds. But I hope too to interest those whom no ludicrous accessories can prevent from viewing with complacency the first awkward and unsteady advances towards an useful object.

Circumstances previous to October, 1799, which influenced the author in his subsequent proceedings.

The more obvious means of enabling invalids to respire an atmosphere permanently modified, of a regular temperature, and at all likely to improve the condition of pulmonary ulcers, offered no great choice. Residence in a cow-house seemed by far

the simplest, safest, and least disagreeable among the expedients actually adopted. And partly from rumour, and partly from the peculiar point of view in which I took up the treatment of the disease, I have long been in the habit of recommending it. Nor is it without extreme regret that I now look back upon the number of instances in which my recommendation failed.—Not unfrequently did I forfeit the good opinion of my patient. Sometimes the expence was felt as an insuperable bar : sometimes the patient's mental torpor* stood in the way ; and at

* This happy passive state has often (particularly in phthisical girls) excited my astonishment. One would suppose, that finding themselves grow worse, week after week, and month after month, they would shut the door in the teeth of their unserviceable medical attendants. Yet in in nineteen cases out of

others the exertion necessary on the part of the friends defeated the scheme. Against this and other experiments, merely as experiments, I have found people prepos-
 sessed much more rarely than I expected ;
 and requiring the curb rather than the
 spur.

A gentleman in the last stage of consumption, *i. e.* with diarrhoea and swelled legs in addition to the other symptoms, mortified by the refusal of the master of a lodging house to admit cows into it, quitted Clifton ; and after a journey of three weeks, executed the plan, greatly to his relief, though not to his recovery.

twenty, they are, almost to the last gasp, ready to swallow nauseous drugs to the measure of the wish of the most drenching apothecary, and disposed to be lulled by the equivocating consolations of the shallowest physician.

About three years ago, an Irish lady went to a considerable expence in fitting up a cow apartment. But a mob of females, who could by no means bring themselves to fancy the scheme, having unhappily got intelligence of the time when the cows were to be driven through a certain passage, assembled at its mouth, and scared the animals so much, that their passionate owner, notwithstanding the extravagant price for which he had bargained, refused the patient their use on any terms. She herself, in disgust, set out the following day for Dublin, where in a few weeks she died. Of this ludicrously brutal scene, my friend, J. Hare, Esq. M. P. was a spectator*.

* These petty circumstances are related to fortify those who would do good in any unusual way, against

It was however, in consequence of this abortive attempt, that my idea of trying the cow-house became strengthened into an unalterable resolution. On the morn-

the disgusts they are destined to devour. In general they may be assured, that as in the present instance, perseverance will finally conquer.—

Last year, a stable, known not to be occupied by its ordinary tenants, was anxiously wished for, in order to give a consumptive person a chance for his life. On application by the patient's brother, the owner protested "he would do any thing to serve him. But" (I copy the words of a note I received on the occasion) "there is a monkey in the stable, and a great many potatoes, which must not be removed." Lest this story, which has not been kept secret, should bring reproach upon the gentleman-owner of the stable, as deficient in feeling for his fellow-creatures, it may be right to subjoin the following vindication :

The monkey and his host.

'Tis Nature's second law to serve a brother:
And apes act right in cherishing each other.

ing of the day when the lady and the cows were to be lodged together, I called on Mr. Hare, and told him I was about a project, which he, perhaps, would think as absurd as many thought my former medical projects. After I had explained myself, he related to me an instance so striking in its circumstances, as to impress me with a stronger persuasion of the efficacy of the cow-house plan, especially as he is well acquainted with the party. For my farther satisfaction, he procured for me a narrative from the patient herself, which is published in French in the fourth part of my *considerations on airs* (Johnson), and is now, I think, become important enough to be reproduced in an English dress. For want of a translation it has, perhaps, been less noticed than a report, so interesting by its candour, its

accuracy, and by its result, deserves to be.

NARRATIVE OF MADAME ———

After a miscarriage at three months, during which I took little care of myself, and after which there remained a discharge of blood for several weeks, I fell into a consumption. It began with a short dry cough, attended by slight feverishness. This I neglected, still continuing to go out, to keep late hours, and in *every thing* to live in a manner too agitated for my state of health, which daily declined. At length I spit blood mixed with purulent matter. My legs swelled. Though not quite irregular, I was much disordered, the quantity being very small and the quality bad. I had lost my sleep; and being as ill as possible, I had several

consultations of the first physicians in Paris. The result of these was, that the complaint was concluded to be too far advanced to leave any hope of a cure. They prescribed asses' milk, and exercise on horseback, which last I was too weak to take.

I was nineteen. I beheld my end approach with deep dismay. One day when I was bewailing myself, a very sensible friend of mine paid me a visit. In the midst of his condolence he recommended me to follow his advice. Since all the faculty abandon you, said he, let me bring you a man who is treated here as a charlatan, because he is not known ; but who, in my opinion, is a man of merit. He brought him. I spit blood in clots. I was in such violent pain, and my fever was so high, that I cried out,

waving my hand, Ah ! if there is yet time, save me ! He promised to do all in his power ; but I heard him say, in a low voice, that it was very late. This did not reduce my fever. He made me promise to follow his orders exactly, how painful soever they might be. I assured him I would obey him implicitly, and I kept my word. He put me, in spite of my fever, into a warm bath, quite close to my bed. I remained in, three quarters of an hour, which quieted me a good deal. They put me to bed much more tranquil, and I had some hours sleep, which convinced me that I was much better. The next morning he put a blister, six inches long, and four broad, upon my chest, which made me suffer a great deal, with very little advantage.

My extreme thinness made it much

more painful ; he removed it and placed it between my shoulders, where I had it four months. Not finding that it had the desired effect, he gave orders for a stable, with three cows, to be prepared for me. This was done in less than twenty-four hours, in a coach-house belonging to my house. They broke open a window, and contrived stalls for three cows. A wooden railing, high enough to lean upon, was all that separated me from the cows. My bed was placed upon planks, about one foot from the ground, the better to let the filth run under. These planks were purposely ill joined, that the vapour might penetrate ; and it was so strong, that every thing white which was brought in, became reddish in a very short time. My apartment was divided into two rooms ; that

which I lived in was pretty large ; and in it was a bed, without curtains, surrounded by a gauze blind, such as they use in Italy for the same purpose, which is to keep away the flies, which always abound in stables, and are particularly insupportable during illness ; a wooden table, two straw chairs, without cushions, bare walls ; such was my chamber. There was a sort of antichamber for the woman who took care of the cows. My surgeon and waiting-maid lodged over-head. I had two different bells, to call them at pleasure. Here I remained nine months without intermission, with the exception of a few rides in a close carriage, the horses not going beyond a walk over the pavement, because of the jumbling, which hurt me terribly.

I forgot to say that my blisters never

mattered but in the stable, but that to keep them running it was necessary to apply fresh blistering ointment every two or three days. At first this weakened me much ; but the hope of recovery kept up my spirits.

I already spit less blood ; soon the expectoration was but tinged ; afterwards the matter became daily less gross ; the legs ceased swelling after being a week in the stable. The first month I was regular, but the quantity small ; the next it was a little more copious, and went on continually improving. From the moment I entered the stable I renounced every species of food, except milk. Asses' milk, at five o'clock in the morning, which before I was obliged to dilute with spring water, passed in the stable without any addition. I had to inhale, morning and

evening, the milk just drawn from the cows. All day I drank nothing else, but rice milk in the morning, well boiled and skimmed ; nothing else. I did not even taste bread for nine months. Indeed I had the good fortune not to wish for any thing else. People came to see me as an object of curiosity, and they found me so much changed, that they thought it was all over with me. The Duchefs of Orleans paid me a visit, and after my recovery she recommended Dr. Saiffert to the Duke, which was the means of making his fortune. From the moment of my convalescence, every body was eager to consult him, and in general found he answered their expectations. But I ought to tell the services he rendered me : all my dressings were done by him or in his presence ; he visited me five or six times a

day, to console and encourage me to bear my sufferings with patience. In short he saved me, at the expence of my hair only, which all fell off, and which he made me shave. It was necessary to repair my foreteeth, which I had neglected during my illness; and I was absolutely forbid to play upon the harp, which had made my breath very short: but what is all this in comparison with life? It was some months before my stomach could bear its ordinary food; and it was with four crout, very simply dressed, and a little bark in wine at night, and Venice treacle, that I perfectly re-established it.

My nerves remained irritable for a long time; but all this disappeared in less than a year; and I am become quite a strong woman. The two principal injunctions of my physician were these: to guard

against blood-letting and cold, which I did, as much as possible ; but this climate is damp, and in spite of my precautions I was subject to colds.

At this moment, while I am writing, I have a violent cold, with a blister at my chest.

I am now thirty-six. I am not so strong as I was at nineteen ; but for all that I shall weather it out very well. Asses' milk, quieting medicines, a blister, which must not be suffered to rise too much, because of the irritation ; no wine or tea ; a great deal of barley water, diluted with milk and a fresh egg, taken fasting in the morning ; and exercise on horse-back in fine weather. I am well convinced, that with this regimen consumptive people might always get well. - When the cough is violent, the mouth ought to

be moistened ; a glass of barley-water is enough. This does not lie heavy on the stomach, as most syrups do ; and I always found myself relieved by it. A great deal of camphor and opium ought to be put into the blister, that it may occasion as little irritation as possible."

" In answer to the questions of your friend, Dr. Beddoes, I can assure him that I had night-sweats almost always, and shiverings more or less slight, followed by heats, more or less violent, which continued long after I was in my stable, and left me only in consequence of my blisters."

A senior prince of the blood, with whom I had an interview at the Hotwells, on the subject of his health a few years ago, understanding that I wished to give the plan described in the preceding letter a

fair trial, informed me that he was acquainted with the writer. He added, "that he knew some emigrants of distinction besides, who had been cured of confirmed consumptions, in the same manner, by Dr. Saiffert."

On the passage of the present Duke of Orleans and his brothers through Clifton, last winter, the Count de Beaujolois was seized with pneumonia, which gave me an opportunity of learning from these gentlemen, that Dr. Saiffert was well understood to have succeeded in various acknowledged cases of consumption. But on account of their age, at the time, they could give no particulars.

Cases treated under the author's inspection.

CASE I.

MRS. FINCH, daughter to Dr. Joseph Priestly, had, for many years, greatly suffered from weakness of stomach and excessive muscular debility. It was often a severe trial to her to sit upright for above half an hour. The recumbent posture always afforded great relief. I saw her first at the close of the summer, in 1799. Some months before the origin of the complaint for which she consulted me, Mrs. Finch had undertaken to superintend the education of a few young ladies ; an occupation which, especially considering the earnestness with which she

carried it on, requires much exertion of the voice.

The following letter will explain Mrs. Finch's state for some time before I saw her. On her arrival at Clifton, she told me she had been much alarmed by a pulmonary haemorrhage on the journey. The expectoration was completely purulent, and amounted generally to several ounces in twenty-four hours. She had regular chills, heats, and profuse nocturnal perspirations, particularly about the lower extremities. Her flesh and strength had rapidly declined. It was remarkable, that the pulse was seldom above 76 ; but though in frequency it varied so little from the healthy standard, it had a range of force inconsistent with health, and was in this respect highly feverish. Several times, with a view to its comparative

strength, I examined it in the morning and after dinner ; in the afternoon, (when the skin was also too hot) I found it full, bounding, and altogether different from what it had been in the earlier part of the day.

In Mrs. Finch's family there had been many martyrs to consumption. Two aunts had died of it ; and her mother, who died of a fever, had been subject to a cough and profuse pulmonary haemorrhages.

Mr. Barr's account of Mrs. Finch's case.

Dear Doctor,

I am sorry that I have been so long prevented from replying to your request respecting Mrs. Finch. Excepting in the insidious mode of its attack, and the almost total absence of vascular fever during the

whole time that she was my patient, I recollect nothing in this case different from the usual progress of pulmonary consumptions. There were occasional accessions of dyspnoea, from real or supposed colds, attended with shivering and increased expectoration ; and these were followed by flattering remissions and sanguine hopes. The disease was not preceded by general fever, or any marked local inflammation, but I believe, had arrived, at what is usually stiled the second stage of phthisis, the expectoration of pus, before even she herself suspected that she was seriously unwell, or thought it necessary to apply for medical aid. The quantity of matter expectorated in any given time, was never accurately ascertained ; it varied exceedingly, and was often affected by causes that cannot well

be explained. I stated to you in a former letter the effects of the digitalis, of opium, of myrrh, and of ether in this case, and certain affections of the stomach, that rendered it necessary to alternate and vary the use of them. Since that time the case has been under your own management: and I have no doubt of your having concluded with me, that all the known remedies for consumption have but little power in mitigating the symptoms, and none in producing a cure of lungs so diseased. It appeared to me, according to the best rules of medical calculation of which I am professed, that in a few months Mrs. Finch must have fallen a victim to a cruel malady, from which our art could not deliver her.

It gives me the sincerest pleasure, that the cow-house has so completely suspended

the progress, and removed, for the present,
every serious symptom of this once hope-
less case.

I am,

Dear Doctor,

Yours respectfully,

JOHN BARR.

BIRMINGHAM, Dec. 19, 1799.

To Dr. Beddoes.

I had been informed that digitalis, in
small doses, had produced disagreeable
effects, without the smallest advantage.
Mrs. Finch suffered me, repeatedly, to
satisfy myself on this point; and I found,
for the first time, what I have oftener
than once observed since, that a single
drop of the saturated tincture, taken three
times a day, produced languor and squeam-

ishness, without abating the cough, expectation, or hectic symptoms. After this discovery, I informed Mrs. Finch, and her brother, Mr. Joseph Priestly, that in my opinion, to seem to place the smallest reliance on medicine, would be to encourage a fatal delusion ; and that there only remained the choice between a sea voyage and (what might appear a very extravagant proposal) constant residence with cows. Mrs. Finch asked me which alternative I should prefer in her situation. I told her, undoubtedly residence with cows. I shall afterwards explain, why I hope little from sailing in cases like her's. After a short consideration, she acceded to the proposal, and never afterwards shrunk from its execution, or betrayed a single sign of impatience during her long confinement.

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The following letter will explain Mrs. Finch's state for some time before I saw her. On her arrival at Clifton, she told me she had been much alarmed by a pulmonary haemorrhage on the journey. The expectoration was completely purulent, and amounted generally to several ounces in twenty-four hours. She had regular chills, heats, and profuse nocturnal perspirations, particularly about the lower extremities. Her flesh and strength had rapidly declined. It was remarkable, that the pulse was seldom above 76 ; but though in frequency it varied so little from the healthy standard, it had a range of force inconsistent with health, and was in this respect highly feverish. Several times, with a view to its comparative

strength, I examined it in the morning and after dinner ; in the afternoon, (when the skin was also too hot) I found it full, bounding, and altogether different from what it had been in the earlier part of the day.

In Mrs. Finch's family there had been many martyrs to consumption. Two aunts had died of it ; and her mother, who died of a fever, had been subject to a cough and profuse pulmonary haemorrhages.

Mr. Barr's account of Mrs. Finch's case.

Dear Doctor,

I am sorry that I have been so long prevented from replying to your request respecting Mrs. Finch. Excepting in the insidious mode of its attack, and the almost total absence of vascular fever during the

whole time that she was my patient, I recollect nothing in this case different from the usual progress of pulmonary consumptions. There were occasional accessions of dyspnoea, from real or supposed colds, attended with shivering and increased expectoration ; and these were followed by flattering remissions and sanguine hopes. The disease was not preceded by general fever, or any marked local inflammation, but I believe, had arrived, at what is usually stiled the second stage of phthisis, the expectoration of pus, before even she herself suspected that she was seriously unwell, or thought it necessary to apply for medical aid. The quantity of matter expectorated in any given time, was never accurately ascertained ; it varied exceedingly, and was often affected by causes that cannot well

be explained. I stated to you in a former letter the effects of the digitalis, of opium, of myrrh, and of ether in this case, and certain affections of the stomach, that rendered it necessary to alternate and vary the use of them. Since that time the case has been under your own management: and I have no doubt of your having concluded with me, that all the known remedies for consumption have but little power in mitigating the symptoms, and none in producing a cure of lungs so diseased. It appeared to me, according to the best rules of medical calculation of which I am professed, that in a few months Mrs. Finch must have fallen a victim to a cruel malady, from which our art could not deliver her.

It gives me the sincerest pleasure, that the cow-house has so completely suspended

the progress, and removed, for the present,
every serious symptom of this once hope-
less case.

I am,

Dear Doctor,

Your's respectfully,

JOHN BARR.

BIRMINGHAM, Dec. 19, 1799.

To Dr. Beddoes.

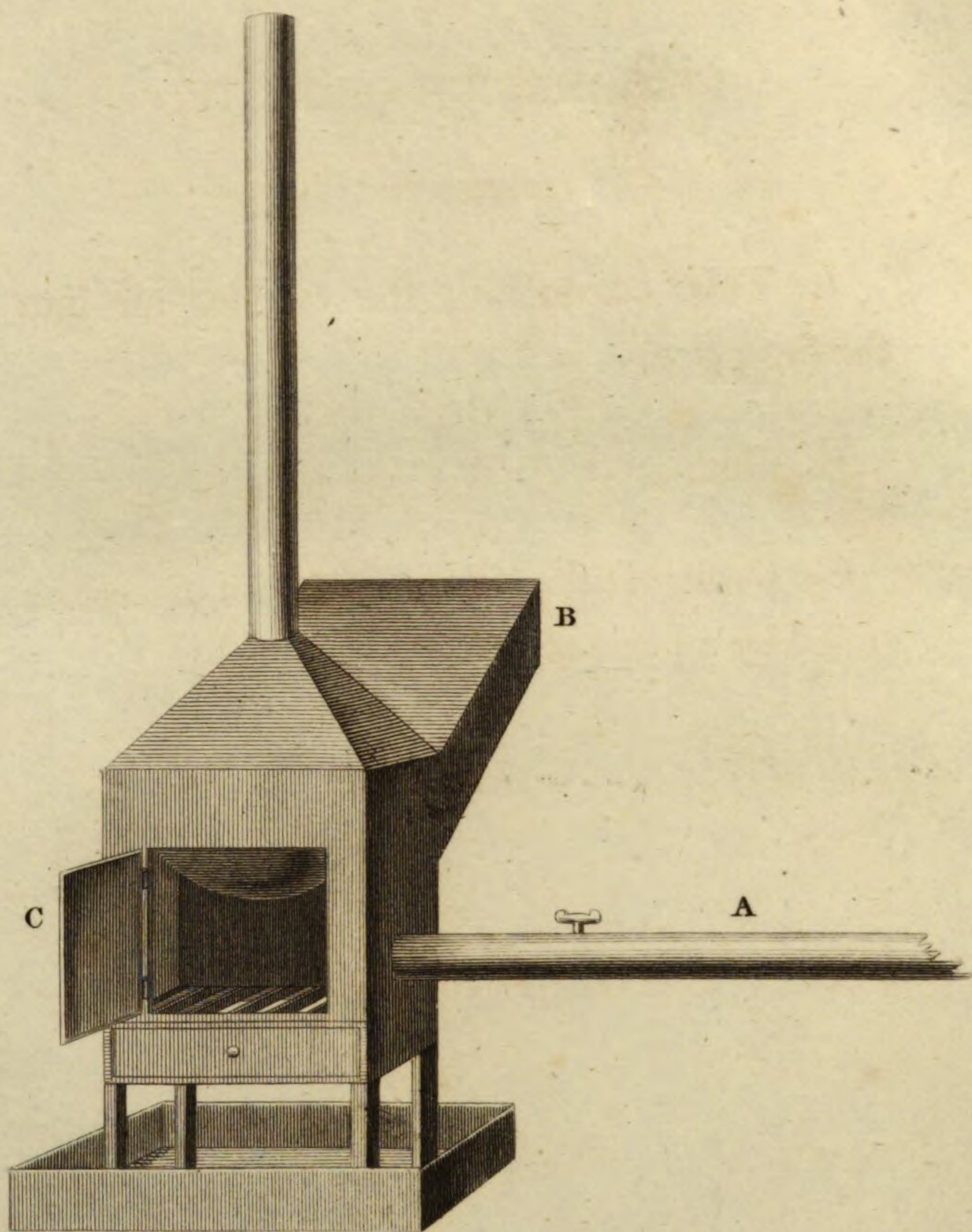
I had been informed that digitalis, in
small doses, had produced disagreeable
effects, without the smallest advantage.
Mrs. Finch suffered me, repeatedly, to
satisfy myself on this point; and I found,
for the first time, what I have oftener
than once observed since, that a single
drop of the saturated tincture, taken three
times a day, produced languor and squeam-

ickness, without abating the cough, expectoration, or hectic symptoms. After this discovery, I informed Mrs. Finch, and her brother, Mr. Joseph Priestly, that in my opinion, to seem to place the smallest reliance on medicine, would be to encourage a fatal delusion ; and that there only remained the choice between a sea voyage and (what might appear a very extravagant proposal) constant residence with cows. Mrs. Finch asked me which alternative I should prefer in her situation. I told her, undoubtedly residence with cows. I shall afterwards explain, why I hope little from sailing in cases like her's. After a short consideration, she acceded to the proposal, and never afterwards shrunk from its execution, or betrayed a single sign of impatience during her long confinement.

A stable adjoining to one of the houses in Gloucester Row, Clifton, twenty feet long, fourteen wide, and nine high, with a small recess, was engaged; and a space sufficient to contain a moderate bed, with a little room to place a table and move about, was partitioned off; and this part was raised, by coarse boards, a few inches above the ground of the stable. Two cows were first placed in the other part of the building, for a few days before Mrs. Finch took up her abode in it.

The complete journal of this case would furnish materials for a book of moderate size. It will, however, be sufficient to describe the remarkable changes in Mrs. Finch's feelings, and in the symptoms.

The first night she had been oppressed in her breathing, and the next day I pre-



EXPLANATION OF PLATE.

A. Tube conducting the exterior air into the fire-place.

B. Flue.

C. Door of fire-place, with its apertures closed by a piece of plate iron.

EXPLANATION OF PLATE

A. Tube connecting the column to the
the fire pump.

B. Tube

C. Foot of the pump, with its
closed by a piece of elastic rope.

vailed upon her to apply a blister to the chest, though she predicted that it would exhaust her, without producing any good effect. The following night there was little or no oppression ; and the air henceforward became in the highest degree grateful, or as Mrs. Finch termed it, *bal-samic*. The night-sweats abated, and soon ceased altogether.

Within about a week from her entrance, she was obliged to sleep a night out of the cow-house, on account of some alteration. That night the hectic symptoms, and particularly the perspiration, returned.

In about six weeks she slept, for the same reason, three nights in a common apartment. The night-sweats had now long since ceased, nor did they return the two first nights ; but the third the lower extremities were bathed in perspiration.

The air of the apartment was kept three degrees higher than that of the cow-house ; but the breathing was laborious, and instantaneous relief took place on returning to the cow-house. On a third subsequent removal into the lodging-house, for about a week, no sign of relapse occurred.

I had been endeavouring to persuade a gentleman, who had resided two or three winters at Lisbon without the smallest advantage, to try the cow-house, rather than return to Portugal. He was curious to have a statement of Mrs. Finch's feelings. I have preserved the note she wrote on that occasion. It was about a fortnight after her entry into her humble abode. The account is as follows :

“ Mrs. Finch's compliments to Mr. —, she can assure him that she has found a

cow-house a much more comfortable abode than she had formed an idea of".

" During the nights, particularly, she has experienced a genial warmth, which has relieved *oppression* on the *chest*, taken off restlessness, and given a feeling she cannot better describe, than by saying it is, as if *nourishment* was conveyed through the pores of the skin. So different have been her feelings from those of the last six months, that she should reluctantly change her apartment for the *night*, however she might wish a *cleaner* and more *cheerful* one for the *day*.

" COW-HOUSE, Oct. 8."

The symptoms gradually abated. In ten weeks there was no vestige of hectic fever ; and the cough and expectoration ceased entirely for days together. The

expectoration would return, at longer and longer intervals, in a quantity not exceeding the bulk of a garden pea. But whenever there was the smallest quantity of expectoration, (and it now took place only in the morning) it never failed to be preceded by distinct febrile rigor; and the chill was never felt without subsequent expectoration.

From the beginning of Autumn, 1799, Mrs. Finch lived in the cow-house for about six months, with the exception of a few days.

The following particulars are owing to Mr. Finch's hourly and assiduous attention:

“ There were two cows for one month; three the remainder.

There was a small stove in the part

where Mrs. Finch slept, which was used for two months nearly half the day ; afterwards, only in extreme frost, or on the room being damp, which from its low situation it was subject to be.

The degrees of heat were, for two months, from 60 to 65 ; afterwards 65 to 70 ; but in general 68, or to the heat most agreeable to Mrs. Finch's feelings.

The cows were allowed very little straw for a month or six weeks ; nor was their standing cleaned. Afterwards they had plenty of straw, and their beds were kept tolerably dry.

The cows' wet had all along a nauseous effect.

The cows' horns were noisy, (especially in the night). Young cows, without horns, would be most desirable, and such as are young in calf.

Hay of the best quality, and the freeest from dust, was found preferable on all accounts.

The straw should be dry, and clean.

The cows were watered twice a day, not so sparingly as might have been. The better the hay, the less water necessary.

Halters to tie with, preferable to chains.

The master-cow to stand first, to the left.

The windows were ill-placed; they should face to the south. They had a northern aspect, on account of the convenience of communicating with the house.

If the patient's apartment could be on a low floor, above the cows, would not many disagreeable circumstances be avoided?"

I was at first apprehensive of excess of warmth, and my anxiety on this head,

together with that of Mr. Joseph Priestly, probably retarded Mrs. Finch's recovery at first. During the subsequent period, careful attention to circumstances induced me to request, that in regulating the temperature no standard might be regarded but the feelings at the moment, and for some time afterwards. In a paper lying before me Mrs. Finch says, " I always felt best when the thermometer was at 68° or 70° ; and when there was a medium between excessive damp and the too dry heat of a constant stove. The stove, lighted in the morning, to dry a little of the moisture collected during the night, was pleasantest to my feelings."

Successive generations of flies were a considerable nuisance; and the cordage and other parts of the bed were speedily

rotted. The vapours were evidently alkaline. They gave nobody cold.

No attendant indeed suffered from a longer or shorter continuance in a medium so much warmer than the atmosphere. One lady, who spent the greatest part of many days with Mrs. Finch, was greatly relieved from the pains of a chronic rheumatism.

After leaving the cow-house, Mrs. Finch lived for some time in common apartments, kept more than usually warm. In May, 1800, I recommended it to her to try the effect of failing, against a future emergency. The following letter, I thought, gave me a right to congratulate myself, on the preference I had given to the cow-house.

BIRMINGHAM, June 4, 1800.

“ I wrote to Mrs. D——, desiring her to inform you of the event of our first little voyage, which fatigued me very much. I recovered by a rest of some days, and then we proceeded, by gentle stages, to Tenby. From thence we sailed to Cardiff, when the sickness and cold again threw me back, and I required some days to recruit. We then had a delightful *journey* by Shepton. Slow travelling has been of service to me; but what benefit I am to receive from a *voyage* must be from a *long* one, as short trips by sea have evidently hurt me.

“ Believe me your respectful

“ S. FINCH.”

In a letter, dated August 15, Mrs. Finch writes :

“ I am happy in being able to say, that my chest continues perfectly well ; and from the difference of my feelings now, and some years back, I am more than ever a friend to the cows. I avoid colds and night air ; and by rides in the country am anxious to brace myself against winter, without the necessity of a sea-voyage. Mr. Barr thinks, if no unpleasant symptoms appear in autumn, double windows, and confinement to two rooms upstairs, properly regulated, will suffice next winter, without change of climate, and I hope you will be of the same opinion.”

After this date, for many months I continued to receive, either directly or

indirectly, the most favourable accounts of the state of this interesting patient.

During the whole winter Mrs. Finch confined herself to an apartment, artificially heated, and continued to enjoy entire freedom from pulmonary complaints till March 1800, when she got a violent catarrh, respecting the consequences of which I entertain some apprehensions. She thus describes her situation, in a letter, bearing date

BORDESLEY, *March 29, 1801.*

I should have answered your letter before, but I have been too ill to write—with spasms similar to my former attacks; only now they have chiefly been in my bowels, attended with *retchings*, and on my breath, which is by fits *very bad*. My cold, which you are so kind as to inquire

after, was attended at first with so great a discharge of thickened phlegm, as I think, by weakening me, to be the chief cause of my present spasms. I have a trifling cough remaining, and am very weak, not being able to keep long off the bed.

Till this ill-fated cold I had passed the winter with great credit to the cow-house, the *air* of which I still prefer to my warm room, though it is of a good size, and lies to the sun."

CASE II.

A Young person, with purulent expectoration, rapid pulse, and violent hectic fever, on whom the tincture of digitalis had been tried in vain, hearing of Mrs. Finch's amendment, consented to try the same expedient. The first night she was considerably oppressed in her breathing. This oppression immediately abated; the hectic symptoms rapidly declined. The strong rigors and drenching night-sweats never afterwards returned.

This young person was seriously affected with a nervous complaint, not answering to the usual appearance either of hysterics, epilepsy, or catalepsy.

At uncertain times, but ofteneſt about mid-day, a degree of torpor, with cold extremities, came on and roſe to perfect inſenſibility, without convulſions or ſpaſms. Great doſes of opium ſometimes prevented and ſometimes leſſened this ſeizure. On the whole, it was neither better nor worſe in the cow-houſe than it had been elſewhere. It continued till near the death of the patient. Conjoined probably with this nervous complaint, there exiſted an almoſt intolerable thirſt (*ſitis frigida*), of which I wiſhed to attempt the mitigation by ſalted meat and ſpices ; but the imperious feeling prevented compliance with this propoſal. The patient was conſtantly accuſtomed to ſwallow immense quantities of cold water, even at a time when the whole ſyſtem was of a death-like coldneſs.

Nevertheless, for about three weeks the pulmonary symptoms continued to abate ; and an increase of flesh and strength was manifest.

About this time a number of moral causes began to operate in the most unfavourable manner. Various correspondents spoke of the *disgrace* of being in such a situation. This mortified the patient ; and instead of that perfect content which was felt at first, the pity received produced a persuasion, that the situation was really one much to be pitied.

The affections of the heart now became a source of torment. The irresolution of the nearest relations, whether to change the treatment (as under these circumstances was advised) continually tantalized the patient. The temper grew obstinate and peevish. No arguments could

sometimes produce conformity to directions. The affusion of cold water, in case of evening heats, was often preceded by an hour's fretting.

During this period the patient was sinking. After long hesitation a removal took place, and the case soon ended fatally.

CASE III.

A Gentleman who had been under the care of respectable practitioners at Manchester, arrived here in that state in which it is uncertain whether existence is likely to be protracted for a few weeks or a few months. In addition to the ordinary symptoms of consumption, he complained of colliquative diarrhoea and oedematous swellings of the feet. His brother, who desired that some new plan should be tried, since medicine had been so long used in vain, forwarded, with the utmost activity, the preparations necessary for entering into the cow-house. Here, for the first week, considerable relief was

obtained ; but no change took place on which rational hopes of recovery could be founded. The swelling of the feet went off, and did not return till the patient was removed from the cow-house. The diarrhoea was also checked.

After a trial of several weeks, the patient, in compliance with the recommendation of a friend, submitted to the trial of a sea-voyage, in the course of which, on being landed in Somersetshire, he died. It has been already intimated, that immediately on the patient's quitting the cow-house, a return of the oedematous swellings took place.

CASE IV.

A Gentleman belonging to the navy, greatly reduced by cough, purulent expectoration, and hectic fever, placed himself under my care in the autumn of 1799. For many weeks I treated him with tincture of digitalis, cicuta, opium, hyoscyamus and squill ; but no check was given to the complaint. Mrs. Finch's encouraging example induced him to make trial of the effect of the cow-house. Here he continued for above three months. His hectic symptoms by degrees disappeared. His strength increased. It happened that his taylor measured him immediately before and immediately after his

confinement. On comparifon it was afcertained, that the circumference of his body had increafed three inches. His limbs had thickened in proportion. Some cough and expectoration remained when he ventured back into common life. This was in April, too early a feafon. He continued, however, to improve in health, and now confiders himfelf as a perfon with a delicate cheft ; not an invalid.

According to the rate of his decline before becoming a fellow-lodger with cows, he could fcarcely have furvived to the period of his enlargement, if his difeafe had been left to purfue its courfe, The atmofphere of the cow-houfe produced a change confiderable enough to fuffer his conftituion to recruit. This could not have happened without a falutary change in the ftate of the lung for

I have never known the smallest accession of flesh during the progress of phthifical pulmonary ulceration. In this case, therefore, I conclude, that the patient was indebted to his confinement for a long reprieve, at least, from the grave. The plan had not power enough, or was not allowed time enough, to restore the lungs to a perfectly healthy state.

CASE V.

NOT being able to persuade myself that the favourable effects produced upon phthical invalids in a cow-house are owing to any cause but to temperature and to the gasses, given out by the fermenting mass of vegetable and animal substances, in the following instance I excluded the cows, retaining all the other parts of the plan *.

A patient with purulent expectoration, often tinged with blood, and the atten-

* Alkaline vapour, sulphurated hydrogen gas, carbonic acid gas were very conspicuous in their effects. The nature and proportion of these gasses require further examination.

dant hectic fever, who had already suffered greatly during the preceding winter, and had a little recruited in the summer, seemed, notwithstanding the exhibition of digitalis, to be sinking with great rapidity at the close of autumn, 1799. No other resource occurring, I proposed to him to pass the winter months in a place where he should have the chance of benefit from a warm temperature, and from exhalations similar to those in the cow-house.

A stable with two stalls was chosen for the trial. One stall was filled very full of the materials used by gardeners for hot-beds. In the other the patient's bed was placed.

While the hot-bed was in strong fermentation, the temperature of the place

was about 64, and the patient felt relieved. Occasional supplies of the soil of cow-houses and stables were added, as the first hot-bed funk; and as the winter advanced, and the warmth from the fermenting mass decreased, the stable became too cold, and it was necessary to introduce a stove. At 60° and below, the symptoms became more severe; 70° was an agreeable temperature to the patient, though he could well bear a much higher. His disorder soon ceased to make progress, but was not entirely subdued, during a confinement from November till March. The observations made upon the case immediately preceding, are almost literally applicable to the present. Impatience of solitude, and the patient's desire of returning to his labour, cut short the trial. But

he was preserved from the effect of the winter, which probably would have been fatal, and entered upon the spring with increase of strength and flesh, and with his disease diminished in proportion.

CASE VI.

A Lady, upwards of fifty years of age, had laboured under all the symptoms of confirmed consumption. The expectoration, when I first saw her, amounted to many ounces ; and consisted of pus, with a large proportion of mucus. The bowels were in a state of great laxity ; and a very slight cause sufficed to produce a colliquative diarrhoea. Her situation gave her friends the idea of imminent dissolution.

Digitalis, and other medicines, at first produced no beneficial effect under my administration. As it seemed to me hopeless to propose residence in a cow-house,

I advised that the patient should live during the winter in a room, fitted up so as to ensure the command of a steady high temperature. This advice was followed. Double doors and double windows were added to a bed-room. The fire-place was bricked up round the flue of a cast iron stove, for giving out heated air. One of the sides of the stove was pierced, so as to receive one end of an iron tube, the other end of which passed through the wall of the apartment, by which means the fuel was consumed by a current of external air. The iron tube was supplied with a regulator, by which the supply of air to the fire-place of the stove could be checked when the fuel burned too briskly.

The annexed sketch will assist the reader's conception, if the preceding descrip-

tion of this very simple apparatus should be in any part obscure. See the plate.

The patient, whose existence seemed within a few weeks, if not a few days, of its close, was soon sensibly better. She kept the temperature up to near 70° , and the digitalis in small quantities, (with opiates and spice, and acids after a time) was continued as before her confinement. In about six weeks the hectic symptoms had subsided ; the pulse, at different times between twelve o'clock and four in the afternoon, was from 70 to 80. There was an accession of flesh and strength. The cough and expectoration greatly decreased. From January till April she was in a very comfortable and chearful state. But her hectic symptoms now began to re-appear : her cough increased.

She continued in the warm apartments till May, 1800. From this time her health declined ; and after keeping her room a very few days, she died at the end of February 1801.

I had two other consumptive patients, who lived with cows for about three weeks each. One felt much relief at first ; but the approach of winter reduced the temperature of each place, during the latter days of their residence, as low as 54° . The patients were now disagreeably affected by the cold ; and their friends, rather than be at the expence of the measures necessary for producing sufficient warmth, removed them : and I believe both died.

CASE VII.

THIS was not, in any respect, a pulmonary affection ; but it shewed, decisively, the effect of temperature. A gentleman who, probably from anxiety* or mental exertion, had long been declining in flesh and strength, was reduced to an alarming state of emaciation. No organic affection whatever could be discovered. The skin was dry, and the patient suffered extremely from cold. The distress from weak digestion was excessive. A

* This is a much more common cause of atrophy than I had supposed from medical writings. At least I have seen a considerable number of such cases clearly marked in their origin.

diet, consisting in part of vegetables, occasioned at this period, as it had for some time before, an inordinate flow of urine. The urine was not saccharine, but had the odour, often observable in cases of indigestion. Innumerable remedies, principally with a view to strengthen the stomach, or to dislodge worms, had been uselessly administered. It appeared to me probable, that no physical power was so likely to operate favourably, as continued warmth. By its effect on the skin, I expected both to obviate a certain class of unpleasant sensations, and to improve the digestion. In both ways some impression might be made on this *hypochondriacal atrophy*. I was not disappointed. The patient had a building, like a square hollow monument, erected in the middle of a large room, with an arm going into the chimney, which

was bricked up round the flue. A large stove was placed loose within the structure. Double doors and double windows were added. The greater part of the room was at a temperature of near seventy degrees. At the end of a month, the patient preferred the steady warmth of the West Indies with power of locomotion, to confinement. On quitting his room he was found to have increased sensibly in flesh and strength. The hands, which before looked skinny and bloodless, had now a healthy appearance, when held up against the light. Flesh had been gained, and the blood-vessels appeared much better filled. The most remarkable circumstance is, that on the journey from Bristol to Falmouth, during the coldest weather of the early spring of 1800, the patient felt perfectly comfort-

able as to warmth, and even travelled a good part of the way with his chaise-window down; whereas it is certain, there would before have been no end to precautions for fencing against the external air. This observation seems to coincide with an opinion very generally entertained, that strangers from the tropical countries resist the cold of the first English winter better than the natives. Indeed no proof fell under my notice, of the prejudicial effect of continuing a longer or shorter time in any of these heated rooms. No instance of an attendant's taking cold came to my knowledge; and had such an occurrence happened, it could hardly have escaped me.

The friends of the consumptive will, I trust, find these examples particularly

deserving of their notice. In most cases, the business of prescribing and swallowing medicines, whether necessary or not, goes on smoothly enough, except when it happens that the physician is counteracted by some member of the family—the vulgar deception of tossing *doctor's stuff* out at the window being rarely practised. But when new and troublesome measures are to be taken, no success can be expected where the friends of an invalid do not go hand in hand with his physician.

It will strike the superficial, that in several of the preceding cases no complete cure was effected; and undoubtedly the reporter must sincerely lament that he was not throughout successful. The success he had in one instance, rendered his sense of disappointment in another more poignant. But when it is remembered

that the situation of the parties, so alarming on account of the nature of the disease, was rendered altogether desperate by its degree *, and by the failure of the most powerful remedies, the means of preserving the smallest proportion of lives will deserve to be accounted an acquisition to humanity.

Another way of calculating these events is indeed generally adopted. Deaths

* By persons who, seeing the benefit actually arising from residence with cows, were desirous that no handle should be given for that sort of declamation, which occupies the idle and the shallow at a place like Clifton, I was warmly reprobated for having to do with cases such as Nos. III. & VI. Doubtless, the wheels of life were here broken, and it was useless to apply oil to the fragments. But two principles should be held in view by medical men ; 1. To give a patient every possible chance, and even to supply him with a support to rest his hopes upon. 2. To ascertain (what can never be predicted) the limits of every medicinal power.

which would happen in the course of nature—deaths *which would equally happen under the routine*—are imputed to him who has the courage to recur to new measures. Thus of two cases of advanced consumption, let one be treated with plenty of physic; let a modified atmosphere be adopted in the other; if both terminate fatally, the event in the first instance shall be imputed to the disorder; in the second to the new scheme. Hence those diseases against which society ought to combine all its forces of wealth and science, have no auxiliary so formidable as our professional routine. As long as this shall maintain its prescriptive right; and it shall be a reproach to fetch the necessary means of health from the remotest corner of nature, if there they can be found, so long will great improvements

in the art of medicine be prevented, because fear of ruinous censure will depress the talents of the medical philosopher to the level of those of the medical intriguer. And as to the consumptive, it will make little difference whether they be confided to the sole charge of the nurse, or the doctor be joined to her as an associate. —The annals of mankind would offer no example of merit more transcendant than his upon whose tomb it might justly be inscribed :

H. L.
 A PHYSICIAN,
 WHO HAVING MAINTAINED
 A LONG STRUGGLE
 AGAINST MEDICAL ROUTINE,
 AT LAST
 SUBDUED THAT HOMICIDE MONSTER,
 AND CONCLUDED HIS LABOURS,
 BY GIVING
 INVENTIVE GENIUS
 THE FULL FREEDOM OF THE MEDICAL
 PROFESSION.

THE ADVANTAGE to the patient from living in an artificially heated room at home, deserves to be compared with a residence in Portugal or Madeira. If invalids would go to Egypt, or Bengal, or the West Indies, I should prefer due warmth with freedom of motion to confinement. But the climate of Portugal* is either so variable or cold, and that of Madeira in fact so little salutary to the phthifical, that I should have no hesitation, in my own case, in preferring the regular artificial heat that can so easily be commanded at home. Whether heat excited by the sun be not preferable to the artificial, was a scruple started by Mr. Billingsley. It has been answered by his

* Essay on Consumption. To the proofs that are there given, many additional are now in my possession.

own experience, as will be related below, as well as by that of others. The article of *oeconomy* speaks for itself. The comforts of a Lisbon residence are pretty well understood ; though whether at large in Portugal, or closetted in a cow-house, the feelings of convalescence would render either situation supportable.

The *degree* of benefit arising from artificial warmth, in these consumptive cases, cannot be assigned. It was occasionally evident enough, that a certain temperature was indispensable, as without it the patients became stationary or lost ground. Conversely it was proved in Mrs. Finch, that atmospheric air, merely heated, was inadequate to relief.

The principle on which I conceive the cow-house vapours to have acted is well understood in the treatment of ulcers ;

certain applications disposing them to heal. And what way is there, upon which we can depend, of making applications to pulmonary ulcers, but that which gases or vapours offer to us ?

I still presume that the presence of the cows is by no means essential ; nor do I doubt, but that in some states of pulmonary ulceration these vapours will be hurtful. When they arose in great quantities from stirring the fermenting materials, they were found to be so. It will be a strong recommendation to the further trial of the power of these vapours, if my statement should convince a certain number of patients or practitioners, that upon them depends the sole benefit. Vessels containing the fermentable substances could easily be introduced into a warm apartment ; the former as easily

be regulated by covers, and the vessels removed entirely, the moment the exhalations appeared to disagree.

be retained by cover, and the result

removed entirely, the moment the cover

is turned to the right, or

the cover is turned to the left,

the cover is turned to the right,

the cover is turned to the left,

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Cases where the use of medicine, and artificial warmth were begun at the same time.

JOHNN BILLINGSLEY, Esq. of Ashwicke Grove, Somersetshire, had complained of a short cough, in the beginning of the winter of 1799, and 1800. This continued, and began by degrees to be accompanied by feverish feelings. Afterwards expectoration took place. All these complaints went on, increasing in regular progression, till March 1800, when I first saw Mr. Billingsley. I found him, in the evening, with a pulse at about 120 in a minute, complaining of cough, pains in the chest, difficulty of breathing, chills, heats, and most profuse nocturnal

perspirations. The expectoration amounted to seven ounces in twenty-four hours, and consisted of purulent matter, largely intermixed with mucus. Mr. Billingsley was excessively reduced in strength, and much emaciated.

Had it been left to my choice, as influenced by my expectations respecting the event, I should certainly have declined the care of a person, to whom the eyes of people in this part of England are so generally turned.

To his two medical friends, Mr. Perkins and Mr. Hill, as also to his family I stated, that he appeared to me verging fast towards the last extremity, if the case were not already desperate.

To himself, at their desire, I explained as well as I was able, the nature and probable comparative efficiency of the measures that might be adopted for his reco-

very. I told him that I had no expectation from any medicine but *digitalis*, occasionally assisted by other articles of the *materia medica* ; but that I was by no means willing to trust to medicine alone. The auxiliary means I had in view were of two kinds :—a room, simply heated to above 60° ; or a heated atmosphere, impregnated with the exhalations of the cow-house. A third, and in my opinion the only plan remaining, was a long sea voyage. This Mr. Billingsley at once absolutely rejected, adding, that he should prefer the tempered room ; but apprehended, that he was too weak to bear removal to Clifton, a distance of about twenty miles.

It was finally concluded that the attempt should be made, and that a room should be fitted up, nearly as described in

Cafe VI; only that in the present instance two communicating rooms were chosen in preference to one—the stove supplying hot air being placed in the bedroom, and a common fire occasionally made in the sitting room. The stove, as in all the other cases, except the cow-house cases, was one of those called *empyreal* stoves. It was twelve inches square; and the expence of boring a hole to receive the air-pipe, and closing the apertures in the door, added to eleven guineas, the original price, amounted to about fourteen pounds. It was found easy to keep up the fire all night; and during the whole twenty-four hours, the most perfect equality of temperature could be maintained. The heat most agreeable to Mr. Billingsley was from 60 to 65°.

He began to take ten drops of saturated

tincture of digitalis, twice a day, two or three days before taking possession of his apartments. In nine days the chills, heats, nocturnal perspirations, and cough, were sensibly abated. The appetite had greatly improved. The pulse had fallen to about 90 in a minute.

In a fortnight Mr. Billingsley found himself much stronger. He never took for a dose above eighteen drops of the tincture of digitalis, and sometimes only two doses a day; to the last of which was usually added from twelve to twenty drops of the tincture of opium, or corresponding quantities of camphorated tincture of opium.

It may be remarked that Mr. Billingsley's strength, appetite, and spirits, improved at an equal rate. At no time did he experience the smallest disagreeable

sensation, either from his confinement or his medicine.

When he had been under this treatment for a little more than three weeks, he proposed to go to Ashwicke Grove, on condition that the weather was fine, for a single night. The reason for this journey being important, my scruples were overruled. He performed it with the most perfect ease and impunity ; and from that time took an airing during the sunny part of several fine days.

This is an important fact, as it shews that the danger is less than might be apprehended, from passing into a lower temperature from a higher, to which a person with a diseased breast has been for some time accustomed.

Such precautions as warming, to an unusual degree, the apartments which

might be used for sitting or sleeping, were of course employed : and the cooler air after sun-set was avoided. Still, however, Mr. Billingsley, during his absence, must have been immersed in an atmosphere 20° colder than that of his apartments.

After a confinement of about six weeks, the hectic fever being entirely subdued, the cough and expectoration much reduced, Mr. Billingsley quitted his confinement. He persevered for several weeks longer in the use of digitalis, and entirely recovered in all respects. The recovery, as far as the experience of near a year, including a whole winter passed without any particular precautions, can justify an opinion, appears to be permanent.

No inconvenience whatever was felt from exposure to the common atmosphere.

A lady, twenty-two years of age, with narrow chest, prominent shoulders, and hereditary disposition to consumption, after a short cough of many weeks continuance, and slight irregular feverish feelings, began to expectorate purulent matter, and to complain of considerable shiverings in the evening, succeeded by a dry burning skin, and profuse night perspirations. She could not lie on one side, and her flesh and strength declined with the greatest rapidity.

Fearing that digitalis alone, which had been tried, but as I thought not with sufficient attention to the dose in a delicate constitution, would fail to produce a cure, I insisted upon the necessity of a tempered atmosphere; and my remonstrances succeeded.

By means of four drops of tincture of

digitalis, thrice a day at first ; and afterwards from six to eight, (beyond which I never could rise, without languor, innapetence, or sickness) the progress of the disease was sensibly arrested in about three weeks. In five weeks the hectic fever had nearly subsided ; the expectoration and cough were greatly lessened ; and by actual measurement of the arm, an increase of flesh was ascertained.

In three weeks more the complaint was so far abated, that the patient spent the greater part of the fine days of April out of doors ; and by degrees returned to the use of the common air.

All the symptoms of the disease disappeared, and they have not since returned

Two other patients, under the same treatment, experienced the same happy

effect. It was remarked by all these patients, that the stillness of the air became much more agreeable than the currents, and the unequal application of the heat from a common open fire.

The most agreeable temperature was found in these latter instances to be about 65° .

A gentleman of black hair and dark complexion, who had lost several brothers and sisters by consumption, and was himself greatly reduced by that variety of the disease which is called *galloping consumption*, entered into temperated apartments, at the same taking digitalis, with opium occasionally. The heat of the rooms, in conformity with his sensations, was from 66 to 70° . But there took place no abatement of the hectic fever, or of any other symptom. The disorder continued to

hold exactly the same progress as before his confinement: and the case soon terminated fatally.

This gentleman had it in his power to pass into an artificially heated cow-house, as before described; and for several days he sat in it many hours, but without the smallest relief.

A tall, slender female, of conformation strikingly phthifical, and scrophulous complexion, had for four years laboured more or less under complaints of the chest. From the account which I received I concluded, that tubercles had existed in the lungs during this whole period; but that from accidental causes they had fluctuated, as may often be observed, between an active and a dormant state.

For an entire twelvemonth before I was

consulted she had been under the care of various medical attendants, Irish and English. For four months she had expectorated purulent matter, and was in all respects hectic and reduced. She likewise had a continual tendency to diarrhoea, which probably was the reason why the night-sweats were not constant or profuse.

The latter half of September 1800, and the beginning of October, I treated her with gentle doses of digitalis, in conjunction with opium, and the chalk mixture, and such other *astringents* as the state of the bowels perpetually demanded.

This plan was altogether unavailing. The beginning of the third of October she removed into temperated apartments. In these the chills and heats, which were the hectic symptoms by which she had been principally affected, soon abated.

The pulse, from 112, sunk to between 70 and 80°. The bowels became regular. In three weeks the expectoration was reduced one-half, and the night-sweats seldom appeared. She felt a very manifest increase of strength ; and those who saw her agreed in opinion that she had gained flesh.

About the middle of November this lady, her husband, and a servant maid, suddenly complained of head-ache and feverish symptoms. There was at this time, in the same house, a person ill of a contagious fever ; and to infection, from this source, the three persons above-mentioned imputed their attack, which in neither case assumed the form of continued typhus, though the symptoms of the servant, in particular, were such as we observe in typhus, cut short by emetics.

From this period my consumptive patient slowly declined; and in January she died, without suffering much, except at times during the latter stage, from shortness of breath.

Mrs. H. a lady of fair florid complexion and light eyes, came under my care early in autumn, 1800, with advanced tubercular consumption, as distinctly marked as in any of the preceding cases. By guarded doses of tincture of digitalis, largely combined with tincture of opium, and occasionally of columbo and squills, in a way hereafter to be described, the complaint was considerably reduced,—the hectic symptoms now not appearing at all, or being slight; the expectoration reduced from six ounces in twenty-four hours to one and a half.

Under these favourable circumstances, the sudden death of an absent only child produced a temporary indifference to life, and such a desire of leaving my neighbourhood, as could not long be resisted.

During the short remainder of the patient's continuance under my immediate care, I prevailed upon her not to abandon her medicines; and the storm of sorrow was not observed to increase, or disproportionally to diminish the consumptive symptoms. They continued, however, regularly to decrease till she left Clifton.

The journey home, which occupied between three or four days, took place in unfavourable weather. Mrs. H. was for at least a fortnight without medicine; and it appeared from the intelligence transf-

mitted to me at the end of this time, that the complaint had risen again to nearly its former height. My advice was to continue the same plan of medical treatment, with all its variations ; and above every thing, to retire for the whole winter into apartments, artificially warmed to between 60 and 70°.

The medicines were resumed upon this recommendation, and very diligently continued. To the part of my advice respecting temperature, that sort of attention was paid which reminded me of the common saying about half-measures.

From this time the patient fell under the care of Mr. Bryant, a veteran practitioner of South Molton, in Devonshire. Through him I learn, that the apartments in which Mrs. H. lived were

only common apartments, and, in fact, much inferior to common apartments in general, for the house being an old one, much cold came in through the windows; in consequence of which, the patient was, at times, seized with catarrh—and, as Mr. B. informs me, “every increase of the complaint hath closely followed wet stormy weather.” On the 6th of February, 1800, this gentleman reported “the cough much lessened; no night-sweats; bowels regular; menstruation proper; spirits and appetite good; expectoration less and less prevalent. She has gained flesh. Pulse seldom above 84. Two grains and a half of opium*,” he continues, “pro-

* I had requested that the opium might be gradually raised to this dose.

“ cure a sufficient quantity of sleep.
 “ The tinctures of digitalis and opium,
 “ in infusion of columbo, have been
 “ given, so as to occasion a slight nausea
 “ in four or five days ; then discontinued
 “ till the nausea went off. She has not
 “ exceeded six drops of the tincture for
 “ a dose. Let this case end how it will,
 “ I will venture to assert, that your me-
 “ thod hath done more for Mrs. H. than
 “ all the old plans put together ; and I
 “ verily believe, if the whole of your
 “ system was complied with, a great pro-
 “ portion of pulmonary affections would
 “ be cured.” April the 21st I was in-
 formed, “ that latterly, from six to eight
 drops of tincture of digitalis and opium,
 mixed in the proportion of 120 drops
 of the former to 60 of the latter, had
 been taken three times a day, with two

and half grains of opium at night ; that the cough was nearly gone ; that the expectoration was little, and scarcely purulent, with considerable increase of strength and spirits ; good nights ; pulse about 86." Since the 13th instant, however, the symptoms have increased ; hence the termination of a case, so far advanced above eight months ago, and which, in a patient of feeble habit, has ever since exhibited so remarkable a conflict between medicine and disease, continues yet in some measure uncertain.

One asthmatic patient under my care confined himself for a few weeks in temperated apartments, not very conveniently fitted up, as from the disposition of the rooms the effect of the stove did not sufficiently reach the

bed-chamber. No beneficial effect followed.

I am sorry I have no cases to relate of *catarrhus senilis*, or that affection of the lungs, which renders old people in winter so liable to a constant severe cough, and profuse secretion of mucus. My observations, I think, justify me in recommending warmed apartments in this disease with the greatest confidence. The confinement need not be close. The foregoing examples sufficiently shew that the open air might be freely enjoyed during the best part of the milder days of winter. To be exposed to severe weather would not be enjoyment, but its opposite.

From sufferers of this class it would be no valid objection, that so large a propor-

tion of the preceding cases terminated fatally at last. An effect, amounting to very slight alleviation in consumption, would give a person labouring under catarrhus senilis the feelings of health ; and perseverance, for one or two winters, would probably go far towards removing the complaint. Besides, in regard to consumption itself, these cases are, in reality, more encouraging, than would appear without attention to the degree of disease. All the patients had been long ill ; they had already baffled the persevering efforts of medical practitioners ; no considerable relief was expected for them, much less a cure. They are not to be considered as taken promiscuously from the main body, but as belonging to the forlorn hope, of the consumptive.

I expected to hear complaints of disagreeable smells from the iron stove; and had this been the case, I should have recommended rusting the outside by a weak acid, by which I should have expected to correct, in part, the unpleasant effect arising from the gas given out by cast iron at a low temperature. For the prevention of the smell arising from combustible particles that are apt to settle upon the stove, preventing their accumulation seems the only effectual means, unless a case were to be contrived for the body. But these inconveniences were not felt.

At so high a temperature, as that to which my patients were continually exposed, the increase of hectic fever might be apprehended. But the first and great-

est effect appeared, in most instances, to be a reduction of the whole hectic symptoms. Whether by prevention of the cold fit, the associated states were also prevented, as seems to be the case in vernal intermittents from the increasing warmth of the season, I leave to the decision of others.

In all situations appropriate measures should be taken to counteract the hectic febrile movements. In the cold fit, where that is distinct, hot water with spice and opiates, (as camphorated tincture of opium) should be administered on the very accession. In the hot part of the paroxysm you should have recourse to the affusion of tepid water, or to the immersion of the hands and feet, when burning, into cold water for a short time. But where the heat of the body is greater than

that of the extremities, it is better to keep the hands and feet warm, and to take successive draughts of cold water, or cold saline mixture, in an effervescent state. *Small* portions of ice-cream or water-ice, I think preferable. Two teaspoon-fulls of ice will often be sufficient. The whole of one of the glasses, usually sold at the confectioners, is often sufficient to superinduce chilliness. Unmelted jelly, prepared without wine, is no contemptible substitute for ice. During its solution, it produces the same effect in an inferior degree. Taken when a patient has felt cold, it has appeared to me to bring on rigors ; and, according to a rule of general application, it should always be taken warm, when the patient feels cold and *vice versa*. So true is it, that the merest

trifle is, in some constitutions, sufficient to turn the balance of action !

According to my experience, an uncertain state of the bowels need not be regarded as an obstacle to the use of cold water or ice. Patients have appeared never less inclined to diarrhoea than during the hot fit ; and if care be taken not to reduce them below the natural standard, little hazard will be incurred. And I do not perceive, why applying cold externally, should be much less injurious in this respect *.

Removal into a colder atmosphere will subdue the heat of some fever-fits ;

* Probably the tertian type of hectic fever sometimes arises from certain accidental coincidences between a chilly state and the application of cold, or cold-producing means.

getting out of bed for a short time amounts to the same thing. Nor is there danger of taking cold, or of any other mischief, provided the means of refrigeration be not carried to an extreme.

ON THE
POWER AND AGENCY
OF
DIGITALIS.

ALMOST two years ago, in the first edition of a popular tract, I said :
“ *In cases of pulmonary disease, where*
“ *the presence of tubercles was indicated by*
“ *every symptom, and where they seemed*
“ *ready to break out into open ulcers, I have*
“ *verified the efficacy of digitalis; and I*
“ *daily see many patients advancing towards*
“ *recovery, with so firm a pace, that I hope*
“ *consumption will, henceforward, be as*

“ *regularly cured by the fox-glove, as ague*
 “ *by the Peruvian bark.* Could we obtain
 “ a single auxiliary for the fox-glove,
 “ such as we have in many substances
 “ for the bark, I should expect that not
 “ one case in five would terminate as
 “ ninety-nine in an hundred have hi-
 “ therto terminated. But I believe a
 “ majority of cases will yield to simple
 “ fox-glove. It is evident, that no new
 “ cases need be suffered to advance beyond
 “ the first stage, without the application
 “ of this medicine ; and few into it.”
 Could frequency of quotation give im-
 portance to the sentiments of a medical
 writer, that part of the preceding passage,
 which is distinguished by Italics, might,
 for its standing, vie with any aphorism of
 Hippocrates. But it has commonly been
 misquoted at second or third hand, and to

this day, in spite of alteration in a subsequent edition, it continues to be held up to public animadversion as a fally of extravagance.

In regard to the frequency of successful exhibition, the author never dreamt of comparing digitalis to bark. He had merely in view the result of its continued administration, where it *does* succeed ; and perceiving that it would have been better to contrast its gradual operation (which alone he then had in view, as is evident from the words “with so firm a pace,” and the whole context) with that of mercury in venereal complaints, (as somebody, he believes, had done before) he corrected himself as soon as he had opportunity. The proportion of cures is quite a different point ; upon which he expresses his belief immediately afterwards. And when cases of

tubercular consumption, not advanced to the ulcerative stage, are comprehended in the account, (a condition which he expressly includes in his estimate) and no peculiar disadvantages of situation in life counteract the remedy, he still thinks that he has not over-rated its virtues.

WITHIN THREE YEARS I have seen many scores of phthifical invalids from among the poorer classes. I have always had, close at hand, a number of opulent patients of the same description. Each class has, in fact, lain before me, almost as conveniently for comparison, as the objects of his attention lie before a scholar occupied in collating a set of manuscripts. In general, where I had all possible evidence of the existence of tubercles, the exhibition of digitalis has been perfectly

successful. If I specify that it has succeeded in three such cases out of five, I believe I much underrate the proportion of favourable events. With regard to the poor, who apply for relief in sickness, there exists a perpetual cause of uncertainty. Their attendance slackens as their health improves; and they are apt to disappear upon compleat recovery; nor is it always easy to find them out by enquiry. In the richer class I have found the proportion of fortunate cases more considerable than I have stated; and where digitalis alone fails, success is sometimes obtained by helps, of which I shall speak before quitting the subject.

When ulceration has succeeded to interior disorganization, the greater difficulty of cure has appeared to me very strongly marked. Why this should be, is easily

comprehended from general analogy : its full illustration, by tracing the diversity of animal actions step by step, I relinquish to those who may think they understand the nature of phthifical ulceration, and the effect of the particular situation which the ulcers occupy. Entire failure has appeared to me, on the one hand, most frequent in the neediest poor ; and on the other, in those females of higher life, who, from transmitted feebleness, and the want of air and exercise, of wholesome hunger and digestion, appear more like the shadows of human beings, than substantial compounds of flesh, blood, and bone. And as one means for the conciliation of contradictory testimonies, respecting the effect of digitalis in confirmed or ulcerated consumption, I adhere to the opinion expressed in the *West-country Con-*

tributions, 1799, pp. 534—5 : viz. that robustness of constitution is peculiarly favourable to the action of digitalis in this disease.

Of this opinion I find the amplest confirmation in some reports by other physicians, and particularly in a very interesting paper from Dr. Magennis, of the R. N. Hospital at Plymouth, containing an account of seventy-two cases of incipient or confirmed consumption in seamen and marines, treated with digitalis. Of these it appears that twenty-five, with ulcerated lungs, recovered ; and fifteen from the stage previous to ulceration. Moreover, thirteen of the seventy-two, in an early stage of ulceration, were discharged, greatly relieved ; and nine in the previous stage. In ten cases the medicine failed ; but in some of these it gave confi-

derable relief. In some it was continued but from ten days to three weeks ; in others a cure seemed nearly certain, but was judged to be prevented by the setting in of cold weather. So that one is almost tempted to suppose, that by the use of auxiliary means, and by subsequent care, almost every one of these invalids would have been radically cured of phthisis.

Of the cases described at large in this paper, some particulars are very striking. J. Smith, for example, is said to have been “ reduced to the lowest state of “ debility, although twelve months before of Herculean powers.—The moment I saw this man, I pronounced it “ a lost case.”—The expectoration was a pint and half in twenty-four hours. He had every symptom of the disease “ in its “ last and most aggravated stage.” Yet

in about six weeks he was discharged cured.

Of James Wallace's recovery, the most distant hope was not entertained. The physician considered him as "in a cadaverous or semiputrescent state at the commencement." His disease seems to have been forming for some years. He was received into the hospital on the 14th of September, and discharged, cured, on the 28th of November following.

Of William White, the author asks, "why he was kept so long on board ship, in such a deplorable state?" adding, "that soon after his reception he was invalided as an hectic patient, there being little hope, at the time, of his ever leaving the ward in a living state."

(*P. & med. Journ.* v. 201. & s). Yet this patient recovered.

Between seafaring men, and the mass of phthifical invalids from families above the necessity of labour, there is evidently no comparison in point of bodily vigour. Again, marines and sailors have, I suppose, over the unembodied poor, the advantage of a better supply of the necessities of life, especially in the cannibal times which have been brought upon this country. In naval hospitals they are doubtless better attended and better sheltered, than the lowest order in their oftentimes wretched abodes.

As far, therefore, as these facts admit of any conclusion, I think myself justified in repeating what I have of late years been constantly endeavouring to enforce—that as a person is more robust, he will have the better chance not only of escap-

ing consumption, but also of being cured of that disease by digitalis.

From the cases which have fallen under my own notice, I shall select such as I think remarkable on account of some circumstance relating to the patient, or the degree of disease, or the previous treatment. I forbear relating numerous instances of the power of digitalis in incipient or unconfirmed consumption. The particularly severe case of which I gave an account, in the *West-country Contributions*, p. 537, yielded perfectly to digitalis in tincture taken in water, without an atom of any other drug; and now, at the end of two years, the patient is well. In three young women, I doubted whether the complaint was not chlorosis; but finding preparations of iron aggravate the cough, I prescribed digitalis with perfect

success. Sometimes I have found lymphatic glands swollen and sore on the outside of the thorax, at the time when I judged pulmonary tubercles to exist in an active state.

The infant boy, (four months old) of Adjutant Sweeting, of the Somersetshire supplementary Militia, had been exposed to severe cold in travelling. The child, in consequence, had a cough, which went on increasing for three weeks before I visited it. Its mother now complained of its having a severe cough, with wheezing, and regular daily successions of cold, heat, and sweats; and of its not being able to bear a particular decumbent posture, without strong fits of coughing. She added, that it was sensibly falling away. The pulse had an immeasurable velocity.

The well-known existence of turbercles in the lungs of infants, and the perfect regularity of the hectic fever in this child, (a circumstance not belonging to catarrh) led me to consider this as a case of true phthisis. I advised tincture of digitalis, in the quantity of half a drop at first, three times a day ; and as the infant bore this perfectly well, I doubled the dose. In four days the hectic fever was diminished ; and in a week the cough had become manifestly less violent. The pulse also was greatly reduced.

Bilious vomiting was not unfrequently produced, as appeared, by the medicine ; but it did not occasion that continuance of deadly sickness which adults experience *, for the child's appetite seemed

* Adults, however, will sometimes eat with appetite between the fits of sickness, and even while nauseated by digitalis.

improved in the intervals. The tincture was, of course, suspended when the sickness was severe.

In five weeks, under the continuance of this plan, the disorder was removed. At its close aphthae became very troublesome, but disappeared after the application of honey of roses, with borax. A year afterwards I had an opportunity of learning that the child had suffered no relapse; and now, at the end of two full years, I have reason to believe, that it has continued free from pulmonary disorder.

Two other children, under a year old, and one of three months, affected with symptoms exceedingly similar, have fallen under my care—and equal success attended the same plan of treatment.

DR. BRIGGS'S CASE.

Paper put into Dr. Beddoes's hand, by Dr. Briggs, on their first interview; Dr. Briggs appearing desirous to avoid any exertion of the lungs.

“ DOCTOR BRIGGS arrived from
 “ Colombo, island of Ceylon, at
 “ Madras, the 29th of March, 1799, in
 “ strong robust health, not having known
 “ one hour's indisposition for the four years
 “ he had remained at Colombo. The
 “ temperature at Colombo varies through
 “ the year, from about 70 to 85 degrees,
 “ Fah. thermometer. About the middle
 “ of April the southerly wind set in strong
 “ at Madras. This is a damp warm
 “ wind, and of a most relaxing nature; it
 “ raises the thermometer to 92, at which

“ degree it stands night and day. I soon
 “ began to feel the effects of this wind :
 “ loss of appetite, loss of rest, spirits, and
 “ an unaccountable irritation of the ner-
 “ vous system. These symptoms went on
 “ for several days, when I discovered an
 “ extraordinary degree of feverish heat ;
 “ to relieve which I kept the bowels free,
 “ and diluted plentifully. In this man-
 “ ner I struggled on during these winds,
 “ which lasted more than a month ; and
 “ instead of being succeeded by rain,
 “ which is usual in that climate, the wind
 “ came from the westward, and blew vio-
 “ lently hot until the beginning of June,
 “ (thermometer from 98 to 104 degrees)
 “ when it rained a few refreshing showers,
 “ which re-animated me. The feverish
 “ heat soon subsided. My appetite in some
 “ degree returned. I continued mending

“ in health daily until the 13th of June.
 “ I went to bed at ten o’clock, slept till
 “ twelve, when I awoke with some blood
 “ in my mouth. I was somewhat alarm-
 “ ed at this symptom, as it brought to my
 “ recollection having burst a blood vessel
 “ in the right lobe of my lungs, in Nov.
 “ 1786—at which time I lost about thirty
 “ ounces of blood in an hour or two.
 “ This accident was occasioned by a vio-
 “ lent fit of sneezing; and I never had
 “ the least return of it until the 13th
 “ June, 1790. On the 14th in the morn-
 “ ing I lost a few ounces of blood by the
 “ arm. At five o’clock this evening the
 “ bleeding returned from the lungs, in
 “ quantity about five ounces. No pain,
 “ no exertion. From this period to the
 “ 16th, twelve o’clock at night, I lost

“ 150 ounces of blood. During the last
 “ twenty-four hours I drank six bottles of
 “ Rufpini's styptic ; and this evening, at
 “ six o'clock, alum was administered freely
 “ with the styptic. The bleeding ceased
 “ about two o'clock in the morning of
 “ the 17th, and never returned. My
 “ pulse, for the last two days, varied
 “ between 120 and 140, which continued,
 “ with a violent degree of feverish heat,
 “ for three or four days, when I began gra-
 “ dually to amend in health and strength.
 “ My whole sustenance for five weeks
 “ after the accident was bread panada.
 “ I embarked on the 9th of August, and
 “ continued to gain ground daily, until
 “ my arrival at St. Helena. I landed at
 “ Cork on the 14th of January, in good
 “ health, and stout. Travelling through
 “ Ireland and Wales I caught cold, which

“ threw me back a little ; but I soon re-
 “ gained what I had lost, on my arrival in
 “ London.”

*On Dr. Briggs's departure from the Hot-Wells,
 he drew up the following minutes for pub-
 lication.*

TUESDAY March 4, discovered I had
 caught cold, dined out, and unfortunately
 sat in the draft of the door. Eat a hearty
 dinner ; drank half-a-dozen glasses of Port
 wine, and went home tolerably well.
 Went to bed about twelve o'clock. Shortly
 after was troubled with an incessant teaz-
 ing, tickling cough, and abundant frothy
 expectoration. Supposing it was occa-
 sioned by indigestion, I excited myself
 to vomit, and brought up the whole of
 my dinner, wine, &c. &c. Drank a glass

of cold water, and slept through the night.—5th, In the morning, the cough was troublesome, with considerable expectoration, and continued so all day. I remained at home by myself, and instead of dinner, drank three cups of fanative tea, (which I always use) and eat a thin slice of dry toast. This night took two pills, containing three grains of calomel, one-third grain of tartar emetic, and one and a half grain of opium. Restless night, with considerable heat and cough.—6th, In the morning, took one pill, containing one and a half grain of calomel, one-sixth grain of tartar emetic, and three-fourth grain of opium. Cough troublesome, and appetite failing. Dined by myself on broth and one piece of toast. Cough very troublesome, and a most violent head-ache when I coughed, occasioned, I believe,

by the opium. This night took a mixture of sweet oil, honey, and lemon juice, boiled together, which eased the cough. Restless feverish night, and made very little urine for the last 48 hours, with much sediment. 7th, Cough not so troublesome ; expectoration considerable ; no appetite for breakfast ; eat some cod-fish for dinner, and relished it ; drank two glasses of Port-wine ; went to bed early, and took the oily mixture. Feverish night. 8th, No appetite for breakfast ; cough moderate during the day ; eat calves' head for dinner ; drank two glasses of wine ; went to bed early, and began a mixture of vinegar of squills, honey of roses, and lime water ; took it every four hours ; it eased my cough, and made expectoration easier. Fever at night. 9th, No appetite for breakfast or dinner ; repeated yester-

day's medicine ; felt so much better, that I proposed going out. When the carriage came, it rained, and I remained at home. Coughed very little, but felt a sudden uneasiness in my right chest. It appeared to me as if the right lobe of my lungs had adhered to the sternum and was forcibly separated. This occurred about three o'clock in the afternoon, and about seven o'clock in the evening, on coughing, I expectorated blood. Repeated the squill mixture ; had a very restless feverish night ; made very little urine ; coughed hard, and in the morning found I had expectorated a considerable quantity of phlegm and clotted blood. Called in the advice of Dr. Farquhar, who directed me to lose five ounces of blood, and to apply a large blister to my chest. On being bled, I observed my blood was highly inflamed,

so I lost eight ounces. I drank a solution of Epsom salts ʒi in a pint of infusion of red rose leaves ; and had infusion of rose leaves, with syrup of poppy ʒii for a common drink. Went to bed early ; had a very feverish night ; pulse very quick (120). 11th, In the morning, dressed the blister, and lost twelve ounces of blood from the arm ; more inflamed than yesterday ; cough very troublesome ; continued the medicines as yesterday ; no appetite. This evening I felt chilly ; went to bed early ; had a very restless night ; fever ran high ; pulse 116 ; made a very little turbid water. 12th, Dr. Farquhar called, approved of the second bleeding, recommended to continue the medicines, and prescribed five grains of calomel to be taken at bed-time. A very restless feverish night ; calomel produced no

effect. 13th, Took two and a half grains of calomel in the morning, repeated it in the evening; no visible effect. Again in the evening went to bed at six o'clock; fever ran high; cough troublesome; expectoration continues discoloured; no appetite.

14th, Repeated two and a half grains calomel in the morning; had two moderate motions; very little urine; cough troublesome; no appetite; cold fit commenced at two o'clock, P. M.; went to bed at five, when the fever succeeded most violently; pulse above 120. 15th, Saw

Farquhar; continued the infusion of rose leaves, &c. &c.; cough very troublesome, and expectoration discoloured. Regular succession of cold and hot fits; little rest; loss of strength and flesh, and no appetite.

16th, Saw Farquhar, who prescribed half an ounce of salt of wormwood saturated,

to be taken in two quarts of barley water.

All symptoms as bad as yesterday; urine increased in quantity, and clear. 17th,

This night went to bed about five o'clock, with a violent cold fit, and most cruel pains in the right lobe of my lungs; violent fever, and suffered excruciatingly on

coughing; expectoration highly discoloured; continued the saline mixture;

saw Farquhar, and told him I was determined to leave town for Bristol. 18th,

At one o'clock, P. M. left town, being carried down stairs, and put into the carriage. Arrived at Slough at five P. M.

much fatigued. Went to bed with a shivering fit, and some painful affection of the lungs and shoulder; took a glass of very hot water, with a scruple of nitre, and drank plentifully of saline mixture during the night. The only nourishment

I had taken, for the last four days, was a very small quantity of arrow root. This night was, by far, better than any for many nights past. I perspired profusely ; to encourage which I continued in bed forty hours. And the night of the 19th was tolerable ; coughed less ; and though the shivering came on as usual, upon the whole I felt myself better.

20th, Left Slough, and reached Speen-hall about five o'clock, much fatigued. Went to bed immediately ; had no cold fit ; drank plentifully of saline mixture, and had a tolerable night. Pulse from 115 to 120. 21st, Reached Chippenham, much fatigued, and went to bed ; a tolerable night ; coughed less ; expectoration considerable, and mixed with blood. 22d, Reached the Hot Wells, went to bed early, much fatigued. This day I eat the

leg of a chicken, with something like appetite ; had a good night ; drank freely of saline mixture. 23d, Cough moderate ; expectoration considerable, but free from blood ; a good night. Monday March 24, called in Dr. Beddoes. When he saw me I was extremely emaciated, and had not the power, for many days previous to his seeing me, of speaking above a whisper, though my cough and feverish symptoms were considerably abated. No appetite, and great diminution of strength. Pulse between 110 and 112. Dr. Beddoes advised not to drink the Hot Well waters. He prescribed xx drops of tincture of digitalis three times a day. In less than twenty-four hours my pulse was reduced to 85. 25th, Had an uncommon good night ; repeated the draughts, and the pulse reduced to 75. Cough mode-

rate, and expectoration somewhat decreased; quantity of urine increased considerably. 26th, Dr. Beddoes discovered a variableness in my pulse, and repeated the draughts, with only x drops of tincture of digitalis thrice a day. 27th, Good night, strength returning, and appetite increasing; pulse from 70 to 74; repeat draughts as yesterday. 28th, Good night, all symptoms better than yesterday; pulse 68; repeat draughts twice a day, with tincture of digitalis drops xiii. 29th, Still improving in every respect; continue to expectorate a considerable quantity of a thick glary phlegm, with ash coloured specks; pulse 68. 30th, In all respects as yesterday; cough entirely subsided; repeat draughts twice a day. 31st, Continue getting better; pulse 76; repeat draughts, with sixteen drops of tincture of

digitalis, twice a day. This evening and night I found the pulse vary considerably, but never above 76. Night restless, felt myself hot, and much lassitude. April 1st, Dr. Beddoes discovered a variableness in the pulse, and reduced the tincture of digitalis to gtt viij bis die. 2d, Had a very good night ; pulse between 68 and 74 ; repeat draughts twice a day. This day being very mild, walked on the terrace for a few minutes, and enjoyed the fresh air the first time since the 4th March. 3d, Entirely free of cough ; expectoration more moderate, though still glary, with ash coloured specks ; pulse between 64 and 70 ; sleep uncommonly well ; eat heartily of any thing, three times a day ; repeat medicines as yesterday. 4th, Mending slowly ; repeat medicines ; pulse about 70. 5th, Ditto. 6th, Ditto. 7th, Repeat

medicines, with tincture of digitalis drops
 vj twice a day. 8th, Repeat medicines,
 with tincture of digitalis drops x twice
 a day ; pulse about 74 ; take exercise when
 the weather permits. 9th, Pulse reduced
 to 60 ; repeat medicines, with eight drops
 twice. 11th, Repeat medicine, with drops
 ix twice. 12th, Ditto. 13th, Pulse as
 low as 55 ; omit medicine. 14th, Pulse
 74 ; x drops twice ; strength returning,
 and appetite good. 15th, Walked up to
 Clifton morning ; and evening returned
 tired in the legs, breathing quite free ; ex-
 pectoration very moderate ; pulse 70.
 After returning from my walk in the
 evening, pulse increased to 88 : remain-
 ing quiet on the sofa for an hour, it fell
 to 74. Repeat medicines. 16th, Repeat
 medicines, with eight drops. 17th, Ditto.
 18th, Ditto. 19th, Ditto. 20th, Ditto.

I now considered myself as perfectly recovered : every hour increasing in strength and flesh. I continued the medicines for at least two months, and repeated them at an interval of two months for twenty-five or thirty days, then desisted two months, and repeated the digitalis again. In the month of February, 1801, I caught cold, and a violent cough was the consequence. It increased for eight or nine days, and was attended with violent spasmodic affection of the diaphragm. I again had recourse to the digitalis, in quantity two grains a day. In two or three days the spasmodic affection ceased, and the cough, in a very few days, entirely left me. Notwithstanding which, I continued the use of the digitalis for more than a month. I am now as strong, stout, and healthy, as ever I was. I am

fully persuaded that I owe my recovery to the digitalis, on both occasions. I shall ever gratefully acknowledge myself indebted to Dr. Beddoes, for his advice and unremitting attention to me during my severe illness.

JOHN BRIGGS, M. D.

BATH, *April* 11, 1801.

I do not know whether there will be any difference of opinion with regard to the title to which the preceding symptoms ought to be referred. I cannot conceive so much pain and fever without disorganization; and, probably, tubercles had formed, or were forming. The case would surely have run on to a fatal termination; for that alleviation which the journey

produced, could not possibly, I believe, have been permanent ; and it was no more than often takes place, after a journey, in the most confirmed and most distinct cases * of tubercular phthisis. Dr. Briggs's report sufficiently announces the presence of cough, pain in the chest, haemorrhage, breathlessness, and hectic fever, with expectoration. And this expectoration certainly appeared to me of a very suspicious nature.

The danger of a return of haemorrhage was, I understand, insisted upon, as an objection to Dr. Briggs's removal from town. I believe such objection to be to-

* I have often availed myself of this fact. Airings produce little or no advantage ; but some patients, by being made to travel as many miles every day as if they were on a journey, escape, in great measure, the cough and hectic fever.

tally unfounded. In haemoptysis and pulmonary haemorrhages, I never observed any bad consequence from travelling in a carriage: on the contrary, I have repeatedly known these discharges to stop on a journey, though previously they had, for many days, occurred at least once in twenty-four hours.

MR. CHARLES TORIN,

AET. 22.

OF a thin habit and dark complexion, with dark hair, after spitting blood, was troubled with cough, purulent expectoration, chills, heats, and night-sweats, with difficulty of lying down on one side, and a pulse at 112: he had lost flesh and strength progressively.

Before coming to the Hot Wells, in January, 1800, he had been under the care of a very fashionable physician, by whom he was kept on the most slender diet, and by whose order I understood him to have taken acid and neutral saline medicines, without any benefit whatever. After examination of a patient so far reduced, in whose family also the disease under which he laboured had committed great ravages, I conceived very slight hopes of success. The tincture of digitalis was however prescribed, and persevered in, with variations of the dose, very nearly the same as in the preceding case. Opium was also given, in about the quantity of a grain at night.

The symptoms, in a fortnight, were sensibly less severe ; the hectic fever, soon afterwards, was entirely removed.

In six weeks Mr. Charles Torin left the Hot Wells, nearly restored to his natural strength, and with no symptom of his former complaint, except a little expectoration. This, on continuing the digitalis two months longer, gave way.

At the end of above a twelvemonth I saw my patient, perfectly well; and in this state he sailed for the East Indies about a month ago.

MRS. J.

OF HARLEY-STREET, LONDON,

OF slender make, with brown hair and eyes, was seized with a discharge of blood from the lungs; after which, notwithstanding blood-letting, and other means, she had a continued cough, with

hectic fever, breathlessness, purulent expectoration, loss of flesh and strength. In this state she continued for four months, under the care of a very fashionable physician in London, by whom repeated small bleedings, and a strictly abstemious diet, with many medicines, were ordered.

Mrs. J. continued all this time in a state of miserable languor, her disease making sensible progress. At last she was sent to the Hot Wells.

Here, on a return of the pulmonary hæmorrhage, to the amount of about three ounces, I found her (in the last week of April 1799) in the last stage of consumption, her feet having become oedematous.

The tincture of digitalis was ordered; she took it, under my inspection, in doses of from five to ten drops, and the

disease gradually decreased. In five weeks Mrs. J. was no longer hectic. Of the complaints under which I originally found her labouring, there remained only a slight cough, with a small degree of expectoration, still apparently purulent. In a short time she left the Hot Wells, in a state of rapid convalescence; and continuing the digitalis, recovered a tolerable share of health. During that unfavourable summer (1799) and the ensuing winter, she took frequent colds, which, under the use of digitalis, went off without serious damage.

In the hot weather of 1800 she had a slight return of pulmonary hæmorrhage, and had recourse to the digitalis. No bad consequences followed.

In March 1801 she has had a very severe catarrh; but it has gone off, without

more injury than would have taken place in a person not previously phthifical.

This day, April 27, 1801, at the end of two years, I have had an interview with Mrs. J. and I can discover no vestige of a ferious pulmonary ailment. There is, occasionally, a morning fecretion of phlegm, among which are interfperfed dark fpecks, fuch as we frequently fee when the glands of the mucous membrane fcrete more than its lymphatics abforb. Mrs. J. herfelf is of opinion, that her health and ftrength have regularly improved upon the whole, fince fpring, 1799.

In the reports of phyficians concerning difeafes of long continuance, it is a common fault that they drop the ftory too foon, leaving the intelligent reader un-

certain whether the long-established habits of morbid action may not have returned after the apparent recovery. I have kept a watchful eye over a variety of invalids, and I could relate a number of instances where success has been as striking and as permanent as in those immediately preceding. In delicate young women, affected with tubercles not ulcerated, where my advice *to continue the remedy (with occasional intervals) for some months after the removal of the symptoms*, has been neglected, I have known relapses happen. But health has always been restored by the same means; and the disorder, as far as I yet know, finally subdued. Vigilance and exertion on a just alarm, are never more necessary than after recovery from any sort of phthysical ailment.

In the preceding cases, I not only per-

mitted but enjoined a full diet. It gave me the greatest satisfaction, to hear from my patients, that they relished animal food twice a day, or once in the day and once in the night. The principle upon which I have advised this regimen is very simple. Since digitalis succeeds worst with the puny and the necessitous, and best with the robust and the well fed, I conceived that a generous diet, by bringing the constitution towards the most favourable state, would give the greatest chance of recovery. I supposed also, that simply tuberculated and tuberculato-ulcerated lungs, are in a condition analogous to other parts affected with scrophula. As to the precautions which we find recommended on account of the structure and situation of the lungs, experience seems to me to shew, that they are highly exaggerated, at least, if not

altogether chimerical. In addition to animal food I often allowed fermented liquors, but under certain limitations. If any particular fermented liquor, or if all kinds, produced coughing and heat of the skin, they were prohibited. I also recommended wine, (or wine and water) at any time rather than after a full meal. A full meal generally produces constitutional action enough, or more than enough, in which latter case, the quantity of food taken at one time should be diminished. In the fore part of the day languor and coldness will often occur, especially where an invalid fasts too long, and then vinous liquor may be taken with advantage.

There are, however, I apprehend, states of incipient phthisis, in which pneumonic inflammation coincides with the formation or progress of tubercles. In these states,

the less severe pneumonia of weak subjects lays the foundation for slow tubercular consumption, just as pneumonia, in its more violent form, terminates, when ill treated, in consumption with large, quickly suppurating abscesses. Where such a complication as that above-mentioned, exists, low living seems indispensable, and ought to be persevered in till that inflammatory action, which does not necessarily precede consumption, ceases, but no longer.

The following curious case is one in which I should consider a strict regimen as essential, even abstractedly from any affection of the liver. It was laid before me in these terms, by Mr. Yonge, surgeon at Shifnal, Shropshire.

“ I write to request your advice for
 ————, whom I am come here

(viz. into Middlesex) to see. His situation you will, I hope, be able to understand from the following narrative. I must first inform you, that two years ago the patient suffered under an attack somewhat similar to the present. He was left by it in a hectic state, less severe than that which he at present labours under. This (February 19, 1801) is the twenty-fifth day since his disease commenced with symptoms of common catarrhal fever, not particularly violent. Under the treatment adopted they did not subside, nor much increase, during the first week. The cough was not severe, but, as he says, *short and frequent in the beginning, and the breathing contracted.* He was not bled. On Sunday, the eighteenth day, I arrived here, when the patient was in the following situation:—Pulse 108; skin hot and dry;

tongue of a brown colour along the centre, but yellow about the edges ; urine rather high-coloured ; countenance adust, and his features contracted ; short though not frequent cough, but the respiration quick, and performed within very narrow limits : yet he was, at the same time, able to respire fully, and without pain. He was then (and had been almost from the commencement of his disease) accustomed to have two or three purging stools every day and night, *very bilious* and offensive. His strength very much impaired, and his flesh wasted. In short, he appeared under circumstances which very commonly attend fevers of the low kind, and for which, I believe, this had been mistaken, bark having been tried, with opium, wine, &c. ; and indeed one very deceitful symptom occurred, in the course, and at an early

stage of his disease: this was a kind of action somewhat resembling subfultus, but in a greater degree than ever I have seen it in typhus; and the trembling of the hands was so great, that he was unable to carry a tea-spoon to his mouth. The circumstances which seemed to oppose the idea of its being a low fever, were the absence of delirium; the strength of the pulse; regular exacerbations of the febrile symptoms, accompanied with flushed face and great heat, once in twelve hours; and the regular progress of the bilious secretion and discharge, without additional debility. I need not be more particular upon this part of the progress. The dismissal of wine and opium, and the use of small doses of calomel, has at once relieved the patient in some respects, and fixed our opinion. The disease has cer-

tainly, I believe, been purely inflammatory, and the chest and liver alone materially affected; but the former especially, and thence alone is danger to be apprehended.

“ *At this time* the patient has *only one* stool a-day, and still full of fresh bile, and *purg-ing*. He coughs more, and expectorates mucus, with some apparently purulent matter, and a very slight tinge of blood. The respiration is still short, but without pain. Pulse varying from 108 to 90. He perspires towards morning and during his sleep: feverish exacerbations, with flushed face, once in twelve hours, and pretty regular; tongue clearer; heat of the skin considerable; strength and appetite improving. His state, in short, if we except the bilious evacuations, exhibits only decided and severe hectic, and impending

phthisis. He is at present taking one grain of digitalis every eight hours, with ten of myrrh, and saline draughts every now and then.

“ W. Y.”

I had nothing to recommend but a strict adherence to the exhibition of digitalis, with calomel, if the state of the liver should seem to require this, and attention to the heat of the skin. On the 27th of February I received the following intelligence from my friend, Mr. Yonge.

“ On the night of that day on which I wrote last, our patient had an effusion of arterial blood from his lungs, and another about twelve hours afterwards, but not more than a table-spoonful in the whole. I bled him, each time, to the amount of four ounces, and applied a

blister to the sternum, where, however, he had no pain or uneasiness. The blood was curled, and with as tough a crust as I have ever seen. He has been since going on much better ; and, I think, he bids as fair for recovery, as he did at least in his former illness."

A physician of great celebrity being now called in, advised the repetition of bleeding on any return of the haemorrhage ; but recommended the discontinuance of the digitalis. But partly from a consideration of its effects in this case, and partly from my earnest recommendation, this medicine was persevered in ;
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The patient continued to do well, and
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feldom been able to carry the dose beyond fifty drops a day of the saturated tincture of digitalis ; and patients in a more opulent condition, have, very often indeed, found twenty drops at two doses as much as could be borne, without oppressive languor, sickness, head-ache, or some other disagreeable effect.

Beside Mrs. Finch, a lady in the house of Peter Hoare, Esq. of New Park, Somersetshire, another in that of Mrs. Bigge, of Benton Hall, Northumberland, and several other adult patients, have found a single drop, once, twice, or thrice a day, sufficient. In the lady at Mr. P. Hoare's five drops at a dose produced sickness, with languor ; while a single drop, taken at most three times a day, reduced the pulse from above 100 to the healthy standard, and removed a nervous atrophy. I have

known several persons bear a tea-spoonful of the same tincture thrice a day, without inconvenience ; and one individual, affected with quotidian ague, took a hundred drops thrice, and sometimes four times a day, without more effect than the spirit might produce in one unaccustomed to fermented liquors.

In the West-country Contributions, (p. 532) I have related a case, in which the pulse being at 80, in a sitting posture and regular, it would, upon the patient lying along the sofa, soon fall to 60, and become irregular ; instantly returning to its former regularity and frequency if the patient sat up again. Of this observation I have frequently availed myself, to ascertain the first operation of digitalis on the system. And where it is desirable to stop short of disagreeable feelings, a

comparison should be made of the state of the pulse in the two postures. We shall sometimes find a greater than natural difference in the frequency and strength, without irregularity.

In a child of seven years old I have observed an instantaneous change from 130 regular to 70 irregular. Dr. Crawford, physician at Bath, lately mentioned to me a very striking instance in a person not five feet eight inches high, of a difference of 45 pulsations under the use of digitalis, between the decumbent and the sitting postures*.

* The whole case deserves record. It is related in the following letter :

“ The symptoms under which my patient, who is a medical man, laboured, were such as are generally supposed characteristic of hectic fever, viz. increased frequency of pulse in the evening, amounting generally to 120 in a minute, attended with fits of chilliness, suc-

This, however, is not universal. In a medical consumptive patient, five feet nine inches high, (Mr. R. Allen, surgeon, of H. M. S. Orion) the contrary obtains. "There are," he observes, "two things
 "about me very odd. The first is, if at

ceeded by augmented heat; and as the morning approached, profuse perspiration. Total want of appetite, and much debility, accompanied the preceding symptoms. These complaints were subsequent to an inflammatory affection of the liver. In this situation recourse was had to the digitalis, and with complete success; for after taking about twenty-five grains, the patient perceived his symptoms to yield, and health was in a short time restored. The circumstance, however, which, during the exhibition of digitalis more particularly excited our attention, was the remarkable difference in the frequency of the pulse, between the decumbent and sitting posture. On the second morning after the exhibition of the medicine, (two grains having been given the preceding night) the patient was not a little alarmed at finding his pulse so low as forty-five in a minute; on sitting up in bed, however, he

stage of his disease: this was a kind of action somewhat resembling subfultus, but in a greater degree than ever I have seen it in typhus; and the trembling of the hands was so great, that he was unable to carry a tea-spoon to his mouth. The circumstances which seemed to oppose the idea of its being a low fever, were the absence of delirium; the strength of the pulse; regular exacerbations of the febrile symptoms, accompanied with flushed face and great heat, once in twelve hours; and the regular progress of the bilious secretion and discharge, without additional debility. I need not be more particular upon this part of the progress. The dismission of wine and opium, and the use of small doses of calomel, has at once relieved the patient in some respects, and fixed our opinion. The disease has cer-

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known several persons bear a tea-spoonful of the same tincture thrice a day, without inconvenience ; and one individual, affected with quotidian ague, took a hundred drops thrice, and sometimes four times a day, without more effect than the spirit might produce in one unaccustomed to fermented liquors.

In the West-country Contributions, (p. 532) I have related a case, in which the pulse being at 80, in a sitting posture and regular, it would, upon the patient lying along the sofa, soon fall to 60, and become irregular ; instantly returning to its former regularity and frequency if the patient sat up again. Of this observation I have frequently availed myself, to ascertain the first operation of digitalis on the system. And where it is desirable to stop short of disagreeable feelings, a

comparison should be made of the state of the pulse in the two postures. We shall sometimes find a greater than natural difference in the frequency and strength, without irregularity.

In a child of seven years old I have observed an instantaneous change from 130 regular to 70 irregular. Dr. Crawford, physician at Bath, lately mentioned to me a very striking instance in a person not five feet eight inches high, of a difference of 45 pulsations under the use of digitalis, between the decumbent and the sitting postures*.

* The whole case deserves record. It is related in the following letter :

“ The symptoms under which my patient, who is a medical man, laboured, were such as are generally supposed characteristic of hectic fever, viz. increased frequency of pulse in the evening, amounting generally to 120 in a minute, attended with fits of chilliness, suc-

This, however, is not universal. In a medical consumptive patient, five feet nine inches high, (Mr. R. Allen, surgeon, of H. M. S. Orion) the contrary obtains. "There are," he observes, "two things
 "about me very odd. The first is, if at

ceeded by augmented heat; and as the morning approached, profuse perspiration. Total want of appetite, and much debility, accompanied the preceding symptoms. These complaints were subsequent to an inflammatory affection of the liver. In this situation recourse was had to the digitalis, and with complete success; for after taking about twenty-five grains, the patient perceived his symptoms to yield, and health was in a short time restored. The circumstance, however, which, during the exhibition of digitalis more particularly excited our attention, was the remarkable difference in the frequency of the pulse, between the decumbent and sitting posture. On the second morning after the exhibition of the medicine, (two grains having been given the preceding night) the patient was not a little alarmed at finding his pulse so low as forty-five in a minute; on sitting up in bed, however, he

“ any time of the day I lie down on a
 “ bed, with my pulse so low as 50, it will
 “ become full and increase to 70 or 75.”

This acceleration may, I suppose, be attributed to the particular situation of some disorganized part of the lungs. On

was astonished to find it immediately rise to ninety. This remarkable difference was observed for several mornings; but as the symptoms began to yield, the digitalis ceased to produce so much effect upon the pulse, and the difference from change of posture was not noticed. It may be said, that the alarm from the slowness of the pulse acted as a stimulus in producing the increased frequency when the patient sat up; but that this was not the cause, is evident from the experiment having been tried with the same effect, on several mornings, when no mental agitation existed.—A similar effect, in consequence of the exhibition of digitalis, is, I believe, mentioned in one of the numbers of the Medical and Physical Journal. The circumstance of change of posture altering the number of pulsations, has, as you well know, been completely ascertained by Dr. Macdonald. In his experiments, as far as I recol-

requesting farther information, I learned,
 “ *that in the morning, after a whole night’s*
 “ *continuance in the decumbent posture, the*
 “ *pulse is at its lowest.*” It would seem,
 therefore, that after the parts have ac-
 commodated themselves to the decumbent

lect, twenty pulsations were the greatest increase from
 the erect posture ; but in the case which I have just
 mentioned, the effect was almost double.—From the
 fact which I have mentioned, I think we may draw this
 practical conclusion, that when we exhibit the fox-
 glove, we ought to attend very minutely to its effects
 on the pulse, when the patient is in bed ; for if we
 trust to an examination after he has risen, we may be
 induced to push the medicine farther, and by so doing,
 run the hazard of sinking the pulse beyond the point
 compatible with life.

“ Wishing you every success in your unremitting
 exertions in the cause of Medical Science

“ I am, &c. &c.

“ STEWART CRAWFORD.

“ BATH, April 13, 1801.

“ TO DR. BEDDOES.”

posture, the usual proportion of action occurs.

When the mild exhibition of digitalis produces no good effect, and the patient is not greatly reduced, I have occasionally found it useful to administer it in nauseating or in sickening doses. In a few cases the purulent expectoration has been lessened at every sickness, and under the use of intermediate small doses has failed to return to its former quantity.

I have very frequently employed digitalis externally; but never alone. I am not, therefore, able to speak with confidence of the effects of this manner of using it. In cases where the common mode fails, I purpose to try friction vigorously, and hope sometimes to succeed. I imagine some analogy of operation between sickness from digitalis and sickness

from failing. The persons, in whom I have seen consumption considerably mitigated, and the very few whom I have known perfectly cured, by a sea voyage, have not, any of them, belonged to the more puny division of the consumptive. And I apprehend delicate females, affected by this disease, rarely experience great relief from sea sickness. I do not, however, feel myself entitled to advance an opinion on this point. I merely offer a conjecture, principally wishing to excite the attention of observers.

ON COMPARING the accounts of failure and success, it may be asked, *whether there does not exist some different pulmonary complaint, in which fox-glove succeeds, while it fails in true consumption?* The query is too obvious to escape any one who has opportunities of observation, and incitements

to reflection. But hesitation in the face of full evidence, is not less discreditable to the judgment, than being positive without proof; and I do not scruple to affirm, that the supposition of two distinct species of pulmonary disease, having certain symptoms in common, and hitherto confounded under the name of *phthisis pulmonalis*, in one only of which digitalis operates as a remedy, is altogether groundless. In a variety of successful cases, conformation, habit, the history of the family, as well as actual morbid symptoms, have indicated tubercles * in the lungs. There is also a gradation of efficacy of digitalis. It will

* I by no means hold *tubercular* and *scrophulous* to be identical. In subjects not only without any mark of scrophula, but of constitution totally different from the scrophulous, I have seen tubercles. From tuber-

sometimes mitigate the symptoms, and nearly suspend the disease for a time, without ultimately producing a cure. It is sometimes, as hitherto administered, altogether inefficacious.

When fox-glove is deficient in operation, I have found the conjunction of opium in large doses, of bitters and

cles in the lungs no age or temperament is exempt, though they do not infest all alike. In some subjects they are probably dispersed, by the benefit of nature, soon after their formation. In some they continue always or long quiescent; in others they run quickly into suppuration. It is not, perhaps, of such mighty consequence whether effusions or preternatural productions, stimulating to phthisical ulceration, have the tubercular form or not. Perhaps chemistry, when so improved as to have just pretensions to decide in pathological questions, will detect as wide differences between tubercles of the lungs, as it has detected between calculi of the urinary bladder.

squills, powerful auxiliaries. I have often joined with it hyoscyamus and cicuta.

Mr. Allen, whom I have already mentioned, having laboured for some time under cough, pain of the breast, expectoration, and hectic fever, took tincture of digitalis thrice a day, in doses, gradually increased, till he reached twenty-five drops thrice a day. It had no manner of effect on his pulse, and did not sensibly alleviate any one of his symptoms, the sediment only in the urine totally disappearing in three days, under its use.

Mr. Allen then took, at my request, a tea-spoonful of the following tincture: tincture of columbo, three drachms; compound t. of cinnamon, two drachms; of opium, one drachm and a half; adding to each dose three drops of tincture of squills for one of digitalis, till he came to

half the dose of digitalis formerly taken alone. In a week, the dose of tincture of digitalis being thirteen drops, and of squill thirty-nine drops, the pulse was reduced to 50.

For further illustration I add an extract from the journal of a case, in which digitalis in simple tincture and decoction, having produced no good effect, the hectic fever, cough, and expectoration, were gradually diminished, by a more complicated plan of prescription.

September 12.—Cough and pulse much reduced since the increase of the opium. No night-sweats; expectoration less.—To take the two following pills, if the slight nausea of which the patient complains this morning, goes entirely off; otherwise only one:

R.

Pulv: digitalis purpur: gr. $\frac{3}{4}$.

Opium pur: gr. iiss.

Succ: spissat: cicutae gr. iv. m ut fiant pilulae ij h. s. sumendae.

Sept. 13.—P. 68.—Scarce any nausea this morning ;
and the same in other respects.

R.

Pulv : digital : purpur : gr. i.

Opil pur : gr. ii.

Succi cicut : spissat : gr. vi. m ut fiant pilulae
iij. h. s. sumendae.

R.

Pulv : digital : purpur : grs

Pilulae styrac. c. gr. iifs.

Succi cicut : spissat : gr. iv. m ut fiant pilulae
iij cras mane sumendae.

14th.—Expectoration less ; cough little ; no night-
sweat ; repeat the morning pills, with a grain of pow-
der of digitalis, at 4. P. M. ; and likewise to-morrow
morning, if no sickness occurs : also, at bed-time,
with the addition of a grain and a half of opium.

15th.—Pulse 60 ; some dry heat of the skin about
7 P. M. No sensible night perspiration. Repeat the
pills as before, three times a day, adding to each dose
two grains of antimonial powder.

16th.—No heat of the skin yesterday evening.
Slight bilious vomiting immediately after awaking this
morning, without remaining nausea. P. 54. Expec-
tation sensibly diminished.

R.

Infus : gentian ; compos :

Aq : menth : pip : ana $\mathfrak{z}$ ss

Tinctur : digital : purpur : gtt. xx m. Capiat

dimidiam partem hora quarta pomeridiana : al-

teram cras mane.

R.

Pulv : digital : purpur : grss

Pilul : scill :

Opii pur : ana gr ij

Succi cicut : spissat : gr. vii m et divide in pilulas

iv h. s. sumendas.

17th.—Expectoration not a fourth part of what it was a fortnight ago. P. 58. Cough little ; no chills, heats or sweats. Can lie, with little inconvenience, on the left side.

I have seen several instances, where the symptoms of consumption having resisted the fullest course of digitalis, yielded to a plan similar to those exemplified above.

When digitalis has failed altogether in incipient consumption, I have occasionally found calomel succeed in a few instances.

The following is one of the most remarkable :

Miss J. W. fair, puny, narrow-chested and tall, has for some time complained of a short dry cough. She is almost every evening sensible of flying chills, succeeded by a hot and parched skin. In the morning the chest is commonly moist. She cannot lie on the right side without cough and shortness of breath. For some time before the cough was noticed, Miss J. W. was uncommonly languid and subject to flushings, especially after dinner. She became out of breath on going up stairs. Her flesh has gradually wasted. She is still regular ; but the catamenia are deficient in quantity. One parent and two sisters, I am told, have died consumptive.

After the useless exhibition of digitalis

for three weeks, (within which time if this medicine does not produce some alleviation, it seldom succeeds at all) I determined to make a cautious trial of mercurials. Their use in complaints somewhat analogous, as in enlargement of the mesenteric glands with hectic fever, induced me to expect benefit in a case where I perceived hectic fever, and believed pulmonary tubercles to exist. In the objections of the older medical writers to mercurials in phthisis, I could not feel any force. I prescribed, therefore, half a grain of calomel twice a day, and sometimes a grain, when the bowels did not threaten to become disordered. In about a fortnight the cough and hectic fever were greatly abated. Perseverance for another week, with augmented doses, produced a slight inflammation of the gums; and

now the cough ceased almost altogether, and the fever subsided. The medicine was continued more sparingly for five weeks longer. The disorder gave way completely; and during a year and a quarter the patient has had no sign of a relapse*.

* A result, as strikingly opposite as can be conceived, has lately occurred to me, in the case of a lady in the family of Anthony Galwey, Esq. of Carrick Castle, Ireland. One of her physicians, Dr. Ryan of Kilkenny, favoured me with the following history of this lady:—"About a month elapsed from the time she
 "began to cough till it was thought necessary to con-
 "sult me. I found her with a constant teasing cough,
 "unattended by expectoration. Her breathing was
 "oppressed, and she complained of wheezing—this
 "symptom, and the cough, were much aggravated by
 "lying on one side in particular. Some perspiration
 "was perceptible every morning, Her pulse was small,
 "quick, and hard. It increased in frequency every
 "evening. All these symptoms shewing the lungs to
 "be materially injured, I had recourse to all the me-
 "thods I have found effectual in preventing the for-

I have sometimes given the *hydrargyrus cum creta*, and sometimes the simple mercurial pill instead of calomel, without any variation in the effect. And I have of

“ mation of matter. She was bled in small quantities,
 “ and had blisters applied to different parts of the tho-
 “ rax ; at the same time being restricted to a milk
 “ and vegetable diet. Still finding the alarmings symp-
 “ toms not likely to yield to this plan exclusively, I or-
 “ dered a medicine, which I have found highly salutary
 “ in the early stage of phthisis pulmonalis, and before any
 “ pus appears in the expectoration :—I mean mercury.
 “ Mrs. ———, however, is one of the cases, in which
 “ calomel united with opium, camphor and James’s
 “ Powder, has failed. On this account, and from the
 “ increase of the hectic fever, I am very apprehensive
 “ that a state of purulency has taken place.”

Between the date to which this account refers, and Mrs. ———’s arrival at the Hot Wells, the disease had greatly increased. The hectic fever, particularly its perspiratory stage, had become extremely violent ; the wheezing troublesome ; the breathlessness excessive ; the expectoration purulent—not copious, but moulded into dense globules ; the pulse 125.

late often joined one or the other with digitalis.

There is a state of confirmed consumption, in which, if an auxiliary to digitalis

I immediately prescribed digitalis, with a moderate opiate at night ; and the pulse now not being hard, the patient was desired to proceed, by quick gradations, to a full diet of animal food. In about nine days the pulse had sunk to the natural standard ; and in double that time, the night-perspirations were all that remained of the hectic fever : pulse subsided ; and in six weeks of a course, in which the digitalis was managed so as to keep below an operative dose, and indeed never exceeded thirty-six drops in twenty-four hours, they nearly disappeared. It took near four months to put an end to the wheezing and purulent expectoration, and to enable the patient to lie comfortably on the left side. The patient has now recovered her flesh, and is as near well as possible ; but the digitalis will be continued some time. During the last two months mercurials have been added to digitalis, to expedite the cure : but as they very soon disturbed the bowels, they have always been soon dropped.

of given operation could be discovered, some lives would be saved. The state I allude to is of this nature. In some instances, when the fox-glove has removed the hectic fever, and greatly reduced the expectoration and cough, the decline shall become almost imperceptible ; the patient frequently appearing chlorotic *, but being really phthifical, as the event most commonly, and sometimes dissection has evinced. During this almost stationary period,

* In young *ladies* chlorosis is too apt to be succeeded by consumption. It would save some disgraceful, and what is worse, some fatal mistakes, if the chance of this succession were kept in view. However convinced that the present symptoms may be referred to chlorosis, the physician should take care how he pronounces *the chest absolutely safe*. It is not difficult to enuntiate an opinion, so as to induce the friends of a patient not to withdraw their solicitude altogether, till the danger of pulmonary complaint vanishes.

the organs of *sanguification* appear inert ; and the deficient production of blood (into which the chyle is probably converted in the lungs) sufficiently accounts for that *consumption* of the body which denominates the disorder. This defect of sanguification explains the emaciating process, when there is no excess of action either in the capillaries or other parts of the vascular system, nor any apparent drain or else less evacuation than exists in cases where there is no emaciation. Those principles which enter into new combinations during muscular contraction, being derived from the blood, and blood not being formed in sufficient quantity, the substance of the body will be wasted by the mere vital movements. Neither will the fat be replaced as fast as it is absorbed ; and so of other parts. In phthifical chil-

dren, where the attractions on which growth (or longitudinal extension of parts) depends, do not cease, though probably solids very different in constitution from the healthy solids are formed, it should seem that emaciation ought to go on with peculiar rapidity, if other circumstances were alike.

In the situation above-mentioned, the conjunction of preparations of iron with digitalis is a very obvious idea. I shall not assert that such combination is absolutely unavailing; but in several instances in which I have tried it, I have not seen decisive good effects. Perhaps, in the described condition of the system, chalybeates do not excite the uninjured parts of the lungs to increased activity in forming blood, which seems the process wanted. Perhaps warmth, or air impregnated with

stimulating particles, may answer; and with the chance of preventing feverishness by digitalis, oxygen gas I think deserves a trial. In one well-marked instance of the *chlorotic* variety of consumption arrested by digitalis, where chalybeates proved in no degree serviceable, I wished to put the powers of oxygen to the test. But the too great resignation of the patient to her fate, and the want of zeal in her friends, frustrated the design.

Under the almost total suspension of phthifical disease in another patient, to whom I mentioned the respiration of oxygen and travelling*, as two possible

* This is the only conjecture concerning the manner in which change of air acts, in which, after much consideration, I can acquiesce. Change of air operates in no complaint with more certain advantage than in chin cough. This fact points directly to an alteration upon the organ immediately diseased.

means of determining the lungs to more vigorous action, the latter was preferred. I may hereafter be able to speak of the power of oxygen from experience.

Mode in which digitalis operates.

OF the medical cyclopaedia, imperfect as it is throughout, no department has, I think, been so unsuccessfully laboured, as that to which the present head belongs.

The treatment of particular articles has appeared to me as little philosophical as the arrangement of the whole ; nor have I been able to contemplate, without dismay, either the barren waste presented by many extensive treatises, or the host of participles, of which language has been plundered, to perplex the *materia medica*.

I will not presume to say, that no dexterity has been shewn in that shuffling and cutting of terms which has employed so many hands ; but I cannot perceive what great winnings it has brought home to students, or practitioners of physic.

The most profitable course, in my opinion, would be to settle in what a knowledge of the operation of any medicine may consist ; and then to compare this idea with our actual attainments.

At present I can only enuntiate an opinion, reserving full discussion to a future occasion. To whatever organ medicinal application is made, I consider the applied substance as a chemical compound. The organs themselves I consider likewise as chemical compounds, extremely variable, and of a peculiar nature for the time being. We know that certain changes in

those organic compounds, which are first affected, will produce successive changes in connected parts, till perhaps the whole frame undergoes a change in its composition, and consequently in its actions. Some effects of these changes will be manifest ; others more obscure ; and others not ascertainable by any of our present methods of observation.

There is nothing in all this peculiar to the beings which we usually denominate *organized*. Alterations in any body will produce alterations in a series of adjacent bodies to an indefinite extent. The changes produced by the burning of a candle, may be traced far into the sublunary system ; and by help of pretty close analogies, they may be pursued into a more remote region of the universe. In organized bodies, if secondary effects are more

fudden or more sensible than in most others, this is owing to the close connection of their members, and to the easily variable constitution of each member. By virtue of their connection, the members of the galvanic piles, at present known, seem to influence one another as readily as the bodily organs ; but being similarly constituted, there is presented no diversity but in the degree of operation.

The system here sketched, I know, cannot be rigorously demonstrated. He who pretends to demonstrate it, must come provided with a compleat list of the principles of organic bodies, and this is but the first step. But it does not, like the unproved and unnecessary hypothesis of a *vital principle*, run counter to the most accepted rule of philosophizing. It is a

system in which the persons of reflection must, to a certain degree, acquiesce ; because, by giving an idea of the immense difficulties that stand between us and the philosophy of organized beings, it accounts for the non-existence of medical science. Nor is this all : it confers inestimable advantages in the practice of medicine. For must it not be impossible for the physician who, in the true sense of his ignorance, has prostrated his understanding, with a kind of religious awe, before the VAST UNKNOWN that resides in the sanctuary of living nature—must it not be impossible for a mind so tutored to discard, unexamined, any instrument of healing ? Such a mind bids fair, likewise, to be always fertile in resources. Whereas the slave of routine and false system will continually be in danger, either of blindly over-

looking, or stupidly rejecting the means that would most effectually relieve those who are crying out to him for help.

According to the above principle, the inventory of our data towards estimating the action of medicinal substances, is soon taken. It is confessed that their intricate constitution, in scarce any instance, has been unravelled. This is probably the case with all, even metallic preparations, in their relation to the animal oeconomy.

Again, we can scarce be said to have advanced a step in vital chemistry. We are not acquainted with the constitution of any one organ in any one of its conditions. We know nothing of the difference between the several conditions compatible with life. How, therefore, the recipient and the received body modify each other in the first instance, remains a

perfect mystery. Nor are we better informed as to many of the consequences of the primary modifications. Of some, our senses may occasionally inform us; and would inform us of more if they were more assiduously and advantageously applied. But we shall most grossly deceive ourselves, if we imagine that such observations as we at present take, can ever amount to a theory or systematical body of facts. They are, perhaps, always remote effects, and therefore, relatively to us, uncertain—the more remote, the more uncertain; because, of the parts progressively affected, if any one, unknown to the observer, be in a different state at different times, or in different persons, the effect that has previously taken place, and is again expected, may fail to appear. Our judgment, however, respecting the cha-

rafter of medical agents must abide by effects, thus remote and uncertain.

The state of the pulse consequent upon the reception of a given substance into the stomach, is one of the effects of which I am speaking. How then is the pulse affected by digitalis in determinate circumstances? In endeavouring to ascertain this, I did not assume, and have always been far from assuming, the Brunonian principles. I was prepared to perceive an inferior action, without the intervention of a greater of any kind, and independently of subtraction of stimuli. I do not think we are yet in possession of such exact observations, as to be sure that a contractile part, for example, cannot be so changed as to contract with less force, as well without previous greater contraction as after diminution of heat or

blood; and the same with regard to sensible parts. But digitalis, in carefully regulated doses, that is, so administered as not to induce sickness or languor, very regularly increases the momentum of the blood. In this view, therefore, it is the contrary to a *sedative*. Of the fact here stated, I think myself more certain for the following reason,

It had long (as I have publicly stated) appeared to me practicable to acquire measures of irritability and sensibility, particularly of the former. I supposed that an instrument might be so constructed, as when applied to some artery, to shew the force of its stroke.

Having mentioned this idea to Mr. Robert Weldon, that ingenious mechanic fell upon a simple contrivance, which seems capable of being rendered worthy of

adoption by medical practitioners, and which, I believe, under a fair prospect of remuneration, he would improve and make public *.

Upon the scale of this instrument, I have seen the pulse of different healthy adults vary as widely as from six to sixteen degrees ; and I am much mistaken if I have not felt an artery with a weaker stroke than that corresponding to six of these degrees, increased to above sixteen under the guarded administration of digitalis. The frequency, it is true, was always diminished ; but still the dilations of the artery, in a given time, would have communicated much more motion.

* I perceive, fully, that uncertainties will arise from the more or less superficial situation of arteries and other causes ; but in common circumstances we should still attain useful approximations.

Having observed how greatly the appetite of many phthifical patients increased under the use of simple digitalis, I have given it in several cases of dyspepsia, and with the best effect. The appetite having increased in these cases, and the symptoms of indigestion having disappeared, I conclude, without imputing to it superior qualities of this kind, that digitalis will increase the power of the stomach. The limitation of the dose is obviously a condition applicable to all substances in possession of the title *stomachic* or *tonic*. In two of these cases the patients were clear that the quantity of urine, particularly of that made in the night, decreased—an effect to be expected in certain circumstances, from whatever strengthens the digestive power.

In three cases of *nervous atrophy*, I have

prescribed tincture of digitalis with success. In these cases there existed excessive sensibility, fever, with evening exacerbations, and wasting of the flesh, without the least appearance of disease in any of the viscera. And the origin of the complaint could be traced to moral or physical causes, peculiarly affecting the nervous system. Small, and upon the whole, infrequent doses, were given in two of the cases ; small ones in the third, but four times a day. This result will be referred by some to the sedative power of digitalis ; but I saw no reason for supposing less contraction in the arterial system during and after than before the cure ; and there was certainly more tone in the other muscles.

The soporific power of digitalis in tincture, diluted by water, or in powder,

has been, in many instances, to the full as remarkable as that of opium. Patients have repeatedly told me, *that they could sleep all day ; and that I was certainly giving them a great deal of opium*, when they were taking none of this latter drug. —From a multitude of examples, I shall produce only the observation of a lady, who lately put the anodyne effect of digitalis to trial, because I doubted whether the prolonged sleep and constant drowsiness, which she formerly experienced, when taking a very slight opiate along with digitalis, was not owing to the opiate :

My dear Sir,

Tincture of digitalis, in doses of from eight to ten drops, in an infusion of quassia, with from six to ten drops of the

aqueous solution of opium, twice a day, has, with me, produced sensations of languor and sleepiness.

“ Wishing to ascertain whether these feelings were the effects of the digitalis alone, or of its combination with opium, I have lately taken ten drops, twice a day, in water, and have experienced languor and sleepiness in an equal if not superior degree to that produced by the same quantity taken with other medicines.

“ The tincture of digitalis has never occasioned nausea, though I have sometimes increased the dose gradually to twenty-five drops three times a day, in infusion of quassia, with a proportionate quantity of opium.

“ I am, &c. &c.

“ S. MORGAN.

“ To Dr. BEDDOES.

“ CLIFTON, *April* 29, 1801.”

Since this and similar facts fell under my notice, I have been consulted by not less than five or six invalids, miserably harraſſed by want of ſleep, and to whom opium, in all ſorts of doſes and preparations, had been adminiſtered, either by myſelf or by other phyſicians, with none but the moſt diſagreeable effects.

A lady in the family of John Wedgwood, Eſq. of Cote-houſe, near Briſtol, had been as great a ſufferer as can be conceived, from watchfulneſs and from diverſified trials with opiates—the *balsamum asiaticum* not excepted.—I was fortunate enough to diſcover the applicability of digitalis, to the intention of producing ſleep in time to render her the moſt eſſential ſervice. The experiment was rendered very ſatisfactory, by the circumſtances attending it. They are ſtated as follow,

by Mr. Wedgwood, who undertook to superintend the administration of the digitalis, which was given in tincture, from four to seven drops three or four times in twenty-four hours.

“ Dear Sir,

“ If my testimony to the soporific effect of the digitalis can be of any use to you, I subjoin below what I have seen. When you began to administer it to the patient, she was very weak and languid, and extremely restless at night, seldom sleeping more than half an hour at a time, and that in a very disturbed manner; usually lying awake till two o'clock, before she began to sleep at all. The first night after beginning to take the digitalis her sleep came sooner, and was more composed and refreshing, and continued so

until that medicine was omitted for a few days, when the restlessness at night returned as before, and was again conquered by a renewal of the digitalis ; and by a perseverance in taking it the sleep is become habitual, though the medicine is now discontinued. These facts fully convinced me, that digitalis might be trusted to as a soporific, where, from particular causes, opium could not be given.

“ I am happy to say, that the patient is now getting better pretty quickly, and has given over taking any medicine at all.

“ Your's truly,

“ JOHN WEDGWOOD.

“ *April 13, 1801.*

“ To Dr. BEDDOES.”

In these instances I sometimes joined an aromatic tincture to the tincture of digitalis ; and sometimes gave it in water, without any perceptible variation in the result.

Opium, in the doses in which it is usually given, proves of the greatest service in curing common colds, after the inflammatory stage is over. Digitalis I believe to be still more speedy and certain in such cases ; and here indeed I regard it as the most unfailing article of the materia medica ; and capable of preventing pulmonary consumption, whenever it threatens to succeed the measles, or the slighter pneumonia of weaker subjects.

In the production of languor, of excess of sensibility, head-ache, and bilious vomiting, digitalis seems greatly to resemble opium. I have known digitalis occasion

an increase of the pulse from 76 to 120, with heat of the skin and head-ache. In two instances I believed it to produce feverishness, with a peculiar mottled appearance of the whole skin. In one person a sort of intoxication so repeatedly followed a dose of fourteen drops of the tincture, taken twice a day for two or three days, that I could entertain no doubt as to the cause.

If, therefore, I were to exhibit the *materia medica* upon a map, I should represent *digitalis* as not merely touching upon opium, but bordering upon it for some space. In another part it should be contiguous to the vegetable tonics, or bitters. I speak here from the phaenomena presented by the living system only, little trusting to analysis for the solution of such a problem, in the present state of

chemistry. It was the idea of such affinity that led me to mix opium or bitters, or both, with digitalis, where this alone proved inefficacious.

To the lady, mentioned in Mr. Wedgwood's note, after she had successfully taken digitalis for some time, I gave four drops of tincture of opium, with ten of tincture of columbo, four times a day, with the same good effects; and yet I had before, in vain, given the same dose of opiate alone. These combinations I think well worthy further investigation. Hops are frequently sold in small quantities, to be placed near the head in cases of watchfulness. I know not if any preparation of the hop, taken internally by those who do not drink beer, would be of use, as an auxiliary to digitalis or opium.

Cold-blooded animals appear to me to

offer a more distinct scale for measuring the powers of certain substances ; and I conceived, if I had rightly fixed the relative situation of digitalis in the materia medica, that experiments upon animals of this class would shew a considerable correspondence between opium and digitalis. I accordingly requested my friend, Mr. King, lately surgeon to the Shropshire supplementary Militia, to make the following experiment. The relation is drawn up by him. We observed the phenomena together, but he stayed longer to watch them ; and it is some security for the exactness of a report, when it is drawn up by a person different from him who, in consequence of a preconceived opinion, proposes the experiment.

“ Two lively frogs were put under separate receivers, with apertures on the

top, after a piece of paper steeped in a strong watery solution of opium, had been applied to the back of one, and another paper of the same size, steeped in a strong infusion of digitalis, to the back of the other. Both shewed extraordinary symptoms of excitement, by leaping violently, and rising upon their hind legs against the sides of the receiver; stretching themselves so as to appear quite stiff for some minutes. These motions, however, abated gradually, and nearly subsided in about three-fourths of an hour, when fresh papers, prepared in the same manner as the former, were applied. The same excitement appeared again, and was now even more violent in both than the former. This subsided completely in about the space of an hour. When they began to be quiet, the slightest touch of a

feather, particularly on or near the nates, made them start suddenly, with great impatience; but to this they gradually ceased to be sensible. An hour and half after the papers had been replaced, they became quite torpid. The only parts which seemed to retain irritability, were the eyes, which they never closed. I laid hold of them without the least precaution; their torpor did not permit them to stir a leg until they felt themselves enclosed in my hands, and then their efforts were much weaker than usual. I now put them into separate glasses, containing cold water. At the moment of their immersion they were violently convulsed, and particularly the one which had been stimulated with opium. This rose against the side of the glass, supporting itself upon its extended hind legs, so as to keep its

mouth above the surface, breathing very fast for three or four minutes. The other was less convulsed, and assumed a similar attitude for about one minute ; then plunged to the bottom of the glass, which it repeated three times in five minutes. After this I placed them again under dry receivers, with air holes ; and their state during the succeeding two hours seemed the same as it was before the experiment.

“ Next day the experiment was repeated upon the same frogs, and in the same manner, and in general with the same effects.— The opium used on this day, however, was weakened, by the addition of one ounce of water to forty large drops of the solution. The frog, to which the opium was applied, was visibly affected in the same manner as before, but in a much flighter

degree. When the torpid state of both was at its highest point, a gentle touch, with a feather, could not induce either to move ; but when teased, and pushed out of their position, they became convulsed, particularly the one that had been stimulated by digitalis on the preceding day. The experiment being repeated, with opium applied to the animal which had been wetted with digitalis, and *v. v.* gave a similar result."

Two frogs, caught the day before, were dipped, immediately on being taken out of the water, for a minute, one in watery infusion of opium, the other in watery infusion of digitalis ; and a third frog, taken out of its water at the same time, was laid under a separate receiver, as also was each of the others. Both of the

dipped frogs soon began to breathe at the rate of sixty or seventy respirations in a minute. That from the opium breathed most laboriously, and for the longest time.

The frog from out of the water rested still during the whole time. The two others immediately began to move wildly about the glass receiver, turning round and round, sometimes to and sometimes from the light.

For upwards of half an hour they continued to rise up the sides of the receiver. That which had been immersed in the opium was observed to stretch itself, two or three times, against the glass, more stiffly : but did not move more constantly.

In four hours the receivers were moved to a dry stand ; and soon afterwards the two dipped animals seemed covered with a mucous varnish, secreted from the skin,

with which the board within the area of the receiver was likewise moistened.

The same three frogs were kept out of water for about sixteen hours; and two were then immersed again in the same infusions, only now both were dipped for two minutes—head and all for a short time, the mouth being held close, so that no liquid might be swallowed. The infusion of opium was here also as in all the other cases, the stronger in its kind. The third frog was dipped in water.

The two first immediately breathed quick and deep; that which had been in the opium most so. This seemed uneasy, but shewed infinitely less vivacity in its movements than the one which had been in the digitalis. In both there appeared, after some time, the mucous secretion from the skin—not at all in the third,

which continued exactly as before it was wetted with water, motionless, at ease, and without quickened respiration.

In these experiments we saw distinctly enough, that digitalis, externally applied, has a very great effect in exciting frogs to motion.

All these animals agreed in falling into a state of torpor, after the increase of action and sensation was over.

It not being necessary to my present purpose to determine minutely the conditions of the operation of digitalis on frogs, I neither introduced it into the stomach, nor followed up the experiment into those numerous variations of which it is susceptible, particularly by comparing the operation of other articles of the *materia medica*.

Toads, in the only experiment we made,

shewed much less propensity to be excited into voluntary motion, either by opium or digitalis. Of five toads, one had a paper, wet with spirit of wine, applied to its body. It was immediately rendered torpid, and kept its eyes shut; and seemed dying for the second quarter of an hour, and died in the beginning of the next.

A second, treated in the same manner, with laurel water, appeared passive, and kept its eyes shut. It rose frequently against the glass, stretching itself on its hind legs. In the third quarter of an hour, more laurel water being added to the paper on the body, it was convulsed for a minute, and then became torpid. When apparently dead, it recovered for a minute, in cold water. The eyes moved, on being touched, for an hour, when the animal died. The limbs were galvanic.

A third toad, with infusion of opium, continued half an hour motionless, with its eyes open, then seemed very torpid; breathed more quickly, and shut its eyes; then gaped, panted, and made uneasy motions. In the fourth quarter of an hour, the animal was convulsed, and vomited so as to invert the stomach. In an hour it died, and proved galvanic.

A fourth toad, with infusion of digitalis, remained motionless, and with the eyes open like the last. In half an hour it was found irritable to the touch, and so continued for an hour.

A fifth toad, wetted with water, as the others had been with the respective liquors above-mentioned, as might be expected, manifested no change; but both this and the fourth, to our surprize, died next day. Hence the animals, it should seem, were

not in a healthy state at the time of the experiment.

If we bring these facts under one point of view, we shall find :

1. *That digitalis, in a certain dose, will increase the action of the arterial system.*

2. *That it will increase the digestive power of the stomach, when that is impaired.*

3. *That it will often induce sleep, like opium.*

4. *That, like opium, in an overdose it occasions languor and excessive sensibility, headache, dimness of vision, nausea, and bilious vomiting.*

5. *That it almost immediately produces great excitement in frogs, somewhat as opium does ; and produces certain other effects similar to those of opium.*

If I were required to offer a conjecture

concerning the general operation of digitalis, I should perhaps say, that it increases the organic action of the contractile fibre as much, or more, than opium ; but that it does not so much, or so immediately, increase the organic action of the nerves. In comparing it with bitters and vegetable tonics, I should reverse this proposition, and impute to it greater power of increasing the organic action of the nerves. These two properties (which though they appear to us either simultaneously but distinguishable in the same individual, or separately in different individuals, branch from a single impression on the mucous membrane and stomach, or skin) seem so combined in digitalis, as to give it its common, but *by no means constant*, power of reducing the frequency of the pulse. Other substances now used in

medicine, if their effects are more accurately observed, will, I doubt not, be found (though less generally, and less remarkably *) to diminish the number of pulsations. Of opium this has been already ascertained. I was led by the hypothetical relation, which I have just stated, of digitalis to opium and bitters, to exhibit these as auxiliaries ; and I believe that digitalis, combined with bitters, will act upon the pulse, when alone it will not ; and when opium produces too great or

* It has appeared from Dr. Briggs's Journal, how speedily a great reduction in the number of his pulsations was effected. I have this day learned, that one hundred drops of tincture of digitalis, given once by mistake, brought down the pulse of an invalid at Liverpool, for whom I have been consulted, from 116 to 58. This, with a temporary diminution of appetite, was the only consequence observed from the dose.

too sudden a nervous excitement, followed by languor too excessive to allow of sleep to intervene, (which state is, perhaps, owing to a more moderate degree, and slower succession of these effects) I suppose, that by diminishing the quantity of opium, and substituting a larger portion of bitters, the soporific operation will sometimes be obtained.

Whatever may be the justness of these ideas, I hope I have brought together facts enough to induce those to pause who may be tempted to argue from a decreased number of pulsations to a decrease of living action, and from this to the propriety of employing digitalis, in the height of inflammatory orgasm. In pleurisy, if any one should be mad or wicked enough to forego the so certain resource of the lancet in favour of the *sedative* virtue of

digitalis alone, he would, I apprehend, increase the disease, if he confined himself to moderate doses. If, with digitalis he employs copious bleeding, his practice will not admit of reasoning, as the benefit from the operation may mask the mischief from the medicine. Perhaps, from the peculiar susceptibility of the system, this mischief will be more, than may be apprehended from experience of states not inflammatory. It is possible that immense doses, by rendering the period of excitement evanescent, might produce the desired effect. On this principle, opium may be sovereign in pleurisy. But I know not who would feel himself justified in proceeding on such a principle. If any one bold enough can be found, it is fit that he should be clearly given to understand what he is risking.

Of those who have used digitalis in consumption with success, several have tried to teach us how it acts. I, too, have diffidently endeavoured to attain a gross conception of its manner of operation; and I imagine it may produce an excitement of the system, so moderated as to resist the cold paroxysm of hectic fever. The suspension of hectic fever may be often witnessed, where the cough and expectoration continue unabated. The effect, however, is propagated to the diseased, in common with the other parts. Here, if the constituent parts of the organization are capable of assuming and supporting a certain vigour of action, the disease lessens: the exhalants of the unbroken and ulcerated pulmonary surfaces discharge less mucus and matter; the lymphatics absorb more; the nerves

lose their acquired sensibility, and the cough abates. But where the sensible and contractile fibres are from constitution and habit feeble, no such salutary change can take place. I should not suppose that in dropsy, the absorbents are excited in a way at all different or more direct, or the veins in haemoptysis.

lost their acquired capability, and the
cough habit, that were the result of
continued use of the constitution and
habit of the body, no further change can
take place. I should not suppose that in
dropsy, the absorption is effected in a way
at all different or more direct, of the water
in hæmorrhage.

OBSERVATIONS
ON
THE CURE
OF
SCROPHULA.

IN several foreign writers I found a medicine strongly recommended in scrophula. To my feelings these writers spoke the language of genuine observation ; and I soon met with cases which resisted calomel, sponge, steel, bark, (tepid) sea-bathing, muriate of barytes, and all the other remedies which are more commonly in use among us. In the known qualities of the medicine, I found nothing at first sight objectionable. I was encouraged by a correspondent ; and so I tried it, with

what success I have now briefly to relate. This medicine is the muriatic acid, saturated with lime—the *muriate of lime*. I have employed no particular nicety in regulating the process by which it has been prepared. Muriatic acid, or spirit of salt, has been taken, such as the shops supply.

I have given it to near an hundred patients, in various conditions of life. The dose has been from ten drops for young children, to two drachms for others, three or four times a day. A drachm, diluted with water, (and this is the way I have often ordered it) I consider as a medium dose.

There are very few of the common forms of scrophula in which I have not had successful experience of the muriate of lime. A few cases will exemplify its powers, and induce practitioners in medicine, when they want a more powerful remedy for scrophula, to have recourse to this.

CASE I.

A BOY, seven years old, with light hair and eyes, distinct blue veins winding beneath a smooth, and what the writers of novels, in their dainty delineations of the human form, call a *transparent* skin, with large head and joints, had a voracious, nearly insatiable, appetite, a protuberant belly, which grew harder at night, wasted limbs, and frequent slimy stools. In the evening he had chills, succeeded by heat and night-sweats. The pulse was generally 120, or above. Scarce a medicine against worms, or *tabes mesenterica*, which he had not taken, particularly calomel, both in small doses, so as to affect

the mouth gently, and in larger, so as to operate smartly on the bowels.

A dose of ten drops of muriate of lime, raised gradually to forty, and which the child took with most pleasure in small-beer or coffee, began first by stopping the purging, then gradually diminished the hectic fever, and in two months restored the child to health, which has been permanent for above two years.

CASE II.

MISS M. S——, daughter of a late chief magistrate in a neighbouring great city, afforded a very striking instance of the power of the muriate of lime, and excited the most melancholy reflections concerning the fate of children, entrusted, as they mostly are, to those inferior busy practitioners of medicine, who have neither information concerning improvements in that art, nor power of reflection enough to correct themselves, by dint of their own frequent and destructive errors.

This young lady, aged 13, had a very

dilated pupil and slender make, in addition to personal appearances, nearly the same as those mentioned in the last case. I found her with unequally protuberant belly, which became remarkably large, as well as tense in the evening; she had wasted limbs, frequent loose stools, hectic fever, feet oedematous at night; short cough, and difficult respiration.

She had been under the care of a fashionable apothecary, who had condemned her to a diet strictly vegetable. He had lately proposed—I can assure the sceptical reader, that the family consists of persons of the fairest reputation, who all agreed in asserting, that this Achilles of an apothecary had proposed—to subject a patient so extremely reduced, labouring under so well-marked a dis-

ease of debility, to a small bleeding, *in order that he might see if her blood were inflamed!* I was in time to arrest the deadly stroke of the lancet.

In three days after beginning to take twenty drops of muriate of lime, which dose was gradually raised to sixty drops, the purging ceased. The appetite for animal food soon became strong, but natural. In nine days the feet ceased to swell; the hectic symptoms decreased; the cough disappeared in the course of the third week. In five weeks the forearm, accurately measured round the thickest part, had gained full three quarters of an inch; and at the end of the sixth week no appearance of disease remained.

In cases like this, the cure of the disor-

der has not been the only result of the treatment. By persevering in the use of the medicine for some months, and by a full diet of animal food, the constitution has become far more robust than it probably ever would have been in the natural course of things, if no such severe disorder had occurred.

CASE III.

A BOY, of eleven years, with a very scrophulous aspect, was brought to me. I found his submaxillary glands enlarged. The muscular debility, under a florid appearance, was excessive. He could not lift a weight at arm's length, which, in a healthy boy of eight years, did not require an effort. On placing him upon his hands and knees, and then laying a load of twenty pounds, with a broad base, upon his loins, he complained of pain.

A two-months course of muriate of lime, to which, as in other cases, a few drops of muriatic acid were added, to

make it more palatable, effected a reduction of the swoln glands, rendered his flesh firm, and enabled him to support infinitely more exertion without fatigue. He could now bear seventy pounds upon his loins, without any inconvenience; and I did not wish to load him to the extent of his ability.

CASE IV.

LAST SPRING a young Lady was placed under my care, on examining whose situation I was struck with despondency. The intelligent reader will perceive from the subsequent account, for the first part of which I am indebted to the father of my patient, Thomas Johnes, Esq. M. P. of Hafod, Cardiganshire, that I had ample cause for this feeling.

“ 1795—M. J. had a worm complaint. The apothecary destroyed the worms, but was said to have left their exuviae behind, probably from want of purging physick.

“ 1796—In the spring carried her to

“ London ; put her under Dr. P——’s
 “ care. He gave her very strong calomel
 “ medicines, which carried away every
 “ thing. On her return, her aunt Eliza
 “ perceived she could not walk so well as
 “ usual.”

“ In September, Mrs. H. Williams’s
 “ maid perceived a distortion of the spine.
 “ I was at Cardigan assizes. On my re-
 “ turn sent for Dr. Davies. He said
 “ there had been discovered a cure by
 “ Pott, viz. setons or issues in the back.
 “ He made two issues by the caustic of
 “ lime.”

“ Dr. Davies said, Jones’s spinal stays
 “ were good things, and wrote to him for
 “ a pair ; which, however, were never
 “ put on.”

“ Mr. L——, surgeon in London, came
 “ to Aberystwith, from thence here. He

“ approved of the issues ; but said they
 “ must be enlarged. He enlarged them
 “ with caustic, so that each held nine
 “ beans. The patient suffered very much.
 “ In the beginning of winter we went to
 “ Bath, where Mr. L—— came to see her
 “ twice. He said nothing could do but
 “ the issues. She was under Mr. ——’s
 “ subordinate care at Bath, who did not
 “ seem to think she was going on well,
 “ yet did not choose to speak out.”

“ Mr. Earle coming to Bath, he was
 “ consulted, and said every thing was
 “ going on well ; though to all our eyes
 “ she seemed very indifferent.”

“ Mr. L—— came again before we left
 “ Bath, and laughed at the idea of Jones’s
 “ stays. Said the sea-bathing would effec-
 “ tually cure her ; and ordered her to be

“ plunged in, the first warm day after our
 “ arrival.”

“ 1796—In the summer we came to
 “ Aberystwith, and the sea-bathing made
 “ her so very ill and infirm, that on Dr.
 “ Davies being called in, he declared that
 “ Jones must be immediately sent for.
 “ He was so, and his stays had not been
 “ put on an hour before she could walk ;
 “ though before her legs were useless, and
 “ so insensible, that to all appearance a
 “ paralytic affection had seized on them.

“ 1797—We returned to Hafod in the
 “ autumn. We continued here, attended
 “ by Dr. Davies ; but in the spring a swell-
 “ ing appeared, which *all* the learned de-
 “ clared to be a Psoas abscess, nay a
 “ surgeon wanted to open it directly.
 “ But Dr. J. E. Smith being here would
 “ have Dr. Davies sent for, and he would

“ have Mr. Abernethy come here. He
 “ did so, declared it a Psoas abscess, that
 “ was not yet ripe, but would be so
 “ in two months ; when he would re-
 “ turn.”

“ All this year we continued very uneasy
 “ about this abscess.”

“ 1798—Remained at Hafod, with
 “ various hopes and fears. This abscess
 “ was dispersed, contrary to the declared
 “ opinion of ———, who said it
 “ was impossible.

“ Don't let law claim alone a *glorious*
 “ *uncertainty*.”

“ 1799—At Hafod, sometimes better,
 “ at others worse. Attended, however,
 “ by Jones with his stays, this as well as
 “ the succeeding year.”

“ 1800—Early in the year a fortunate
 “ pleuritic fever seized her, which drove

“ us to Bristol. The rest you know ;
 “ and thanks to you, under a most merci-
 “ ful Providence, she is restored.”

“ T. J.”

“ HAFOD, *May* 1801.”

When I saw Miss J. I found, besides the curvature, a lymphatic gland in the arm, and a submaxillary gland in suppuration. The strength was excessively reduced. At Hafod (I was told) she had not been able of late to come down to dinner once a month. The pulse was 120. She had chills, heats, and regular night-perspirations. A short dry cough was sometimes heard; and upon the smallest exertion, and sometimes, without this cause, difficulty of respiration supervened, so severe, that I apprehended immediate

dissolution. I concluded, from enquiry into all the circumstances, that the chief cause of this alarming dyspnoea was the debility of the muscles, concerned in respiration.—I suspected tubercles also.

I knew nothing which I could oppose to this formidable complaint with so good a chance of success as the muriate of lime. I prescribed it with small hope ; and when, in the course of three weeks, the family declared that every thing in Miss J's. manner indicated amendment, the continuance of almost all the symptoms, except the alarming fits of breathlessness and the extreme debility, deterred me from sanctioning this opinion. But when, in about a month, I saw that the ulcerated glands had healed, that the difficult breathing occurred no more---that there was a sensible accession of flesh and strength, I could

not hesitate to believe, that the morbid state of the system had been somewhat corrected.

Besides the muriate of lime (about a drachm thrice a day, in water, either acidulated with muriatic acid, or in weak infusion of columbo) Miss J. took a few doses occasionally, when oppressed by difficulty of breathing, of compound spirit of aether, with camphorated tincture of opium. One day only I ordered a few drops of tincture of digitalis; but on the occurrence of some unfavourable appearances, probably not owing to digitalis, I relinquished that medicine.

In six weeks the change for the better, insensible as it had been from day to day, became very striking upon the whole. Miss J. walked up and down, from Clifton to the Hot Wells without inconvenience.

The pulse had become from twelve to twenty strokes in a minute less frequent than at first. The hectic fever was reduced to a slight moisture on the skin towards morning.

The medicine, for the sake of security, has been continued, except for a few days at a time, above a twelvemonth; and there was a constant improvement, till full health seemed restored. No interruption took place, except in December, from a few severe fits of nervous headache, which had probably no connection with the other complaint, and seemed to be removed, either by the *mineral solution*, or by a sternutatory, to both of which recourse was had at the same time.

When the amendment was well ascertained and steadily proceeding, it occurred

to me that the cure might be expedited, by the external use of the muriate ; and accordingly a bath for the feet and legs, consisting of a pint of that salt, and about three gallons of warm water, was used once a day, for half an hour, for some time.

It is intended to persevere in the use of the muriate for a considerable time, but with longer intervals. No medicine has ever shewn greater efficacy ; and whatever power the muriate of lime may possess to improve the constitution, the patient will have the benefit of it. We cannot forget how liable females of this temperament are to pulmonary complaints. And though we hope that in the present instance there is now no more than a common risk of consumption, yet, because some signs of pulmonary tubercles appeared last spring,

as well as in pursuance of a general principle, we shall not, for a moment, relax our vigilance, in guarding against so great a disaster.

This case, besides furnishing evidence for a particular medicine, appears to me to afford two or three instructive lessons.

I. The recommendation of the caustics was undoubtedly proper; and had I been consulted I should have thought it unjustifiable, even though fully aware of the virtues of the *calx muriata*, not to have concurred in this proposal. It was also, I think, perfectly reasonable to enlarge them. But they were, in my opinion, most injudiciously persevered in. The pain and irritation they continued to produce have left an almost indelible

impression upon the imagination of the patient.

As soon as I had acquired confidence in my own reasonings concerning these discharges in the case before me, I directed that what remained of them might be dried up: from which no inconvenience has resulted. Indeed, without waiting till 1800, from 1795 to 1797, might be deemed a trial long enough to give conviction of their inutility. And if it be allowed that they were fully tried, and found useless—for it would be too much to give them credit for curing the supposed lumbar abscess, since they could not prevent it—the fact presents an unanswerable argument in favour of the opinion, that difference of result in the treatment of the sick, often depends upon difference of susceptibility and of association. The nature

of the complaint was here too palpable to leave a doubt in the mind of any person conversant in such subjects.—The difficulty of applying the diagnostics of nosology is small indeed, in comparison with the difficulty of divining susceptibility, and developing associations ! If I might presume to advise so ingenious and useful a body of men as the practitioners of surgery, I would, above all things, recommend it to them to have regard to the compass and variety of nature, as manifested in the human constitution. Otherwise they will sometimes find themselves in the condition of ignorant and impatient children, whose meddling hands having deranged a curious piece of art, are next employed in trying to rectify it. So on they push with main force in one direction, till it breaks. Whereas, had its construction

been humoured, a touch would have put it to rights.

II. I hope that the deplorable effect of the rash prescription of cold bathing, will not be lost upon the givers and receivers of medical advice. Nothing is so dangerous to young weak persons, labouring under glandular complaints or threatened with consumption. By what I have formerly said against this baneful practice, some misery has been prevented in the world; and I have since received ample proofs of the propriety of my doctrine.

The following observation comes from a medical consumptive patient, by whom I have lately been applied to respecting his health: "It is extremely odd, that it
" should never have struck me to men-
" tion, in the original statement of my

“ symptoms, that previous to my first
 “ attack, last autumn, I had bathed in
 “ salt water for weeks. And from my
 “ feelings, compared with your remarks
 “ on the cold bath, I am satisfied, and that
 “ had I not done so, I should have enjoyed
 “ a state of health very different from what
 “ I now do.”

III. Medical men often ascribe an effect
 to a combination of causes, and often,
 perhaps, mistakenly. The paralysis, how-
 ever, of the lower extremities, so quickly
 subsequent to the sea-bathing, clearly
 shews, that the torpor from the cold water
 enabled the pressure from disorganization
 to do that to which the latter cause alone
 was inadequate. Again, when the pres-
 sure was partly removed by the machine,
 the nervous power returned to the lower
 limbs.

IV. If any one can harbour a doubt concerning the use of taking the pressure of the head from off the vertebral column, it will surely be removed by the immediate effect of the machine, which was so properly recommended in this case.

CASE V.

JOHAN POWELL, eight years of age, having lost the sight of one eye entirely, and almost that of the other, by scrophulous ophthalmia, was so reduced in strength as to be unable to stand without support. In a week after beginning to take twenty drops of muriate of lime in sugared water, and raising the dose to forty-five drops, he could stand well without support. In three weeks more he has become able to walk a quarter of a mile, without inconvenience, and seems rapidly regaining his strength. I briefly mention this incomplete case, as a proof of the great and

rapid effect of the remedy, where the disease strongly affects the muscles.

In distinct lumbar abscess I have not had an opportunity to try the calx muriata. But I have seen it answer well in large and deep scrophulous abscesses, accompanied by hectic fever.

My adherence to a simple plan has not always been so strict as to exclude calomel, digitalis, and vegetable *tonics*, as the decoction of the bark of the broad-leaved willow, for instance, and other drugs. Some of these will, doubtless, be found to answer where the muriate of lime fails. But I believe this will be found superior to any one of the others ; and indeed, according to my present experience, it is of more value than all others put together.

Finding effects so beneficial from this

medicine in scrophula, it could not escape me to enquire what would be its use in tubercular and in confirmed consumption. I have paid much attention to this question ; and, I think, others will find their account in doing the same. But before I speak at large, I choose to accumulate more experience with the muriate of lime alone. I think that it removed tubercles, which had formed subsequent to the attack of pneumonia in 1800, in the case of Miss Johnes ; and that it produced this effect in the case of Miss S--- (Case II.) I am as certain as I ever was of any change, not immediately the object of perception. But as the complaint here spread from the abdomen to the thorax, the tubercles might have been dispersed, in virtue of sympathy with the mesenteric glands. I have seen where the diseased salivary and

lymphatic glands returned to their natural state, under the use of the *calx muriata*, while the symptoms of consumption came on or increased. But the same thing may sometimes be observed, independently of any remedy for scrophula ; and this spring I had a patient under my care, in whom the sufferings from enlarged mesenteric glands subsided repeatedly upon the enlargement of the salivary glands, and returned upon their detumescence. The change of seat of the most sensible part of the morbid action was as distinct, though not so rapid, as in gout or rheumatism.

In Master M. Pattison, aged thirteen, much marked with the small-pox, and of fair complexion, light hair and eyes, the respective effects of digitalis and muriate of lime have been remarkable enough to deserve relation, though the case is still in

progreſs. The diſorder, I believe, was either occaſioned or aggravated—by not merely bathing, but—dabbling long at a time in cold water ; of the baneful effects of which practice upon certain conſtitutions, it were to be wiſhed that ſchool-maſters were generally apprized.

After a gradual falling off in health, M. P. was entrusted to a medical practitioner at Plymouth, to whom I owe the following ſatisfactory ſtatement :

“ October 6, 1800, M. P. was found
 “ to have frequent cough, ſhort catching
 “ breath, pain in the ſide, heat and reſt-
 “ leſſneſs at night with perſpiration in the
 “ morning. The febrile exacerbations
 “ were ſtrongly marked, but not regular
 “ in their recurrence ; pulse feeble, 110 ;
 “ pupil dilated ; cheeks ſubject to flush-
 “ ing. Hence tubercles in the lungs and

“ mesenteric indurations” (*from appear-*
 “ *ances not described*) “ were apprehended.
 “ On the 10th of March, after exposure to
 “ cold, he was confined to his bed, with a
 “ pulse at 130, and increased pain of the
 “ side. He took antimonials, with calo-
 “ mel, and had a blister on the side. On
 “ the 16th, after a flow of perspiration,
 “ this accession of disease left him debili-
 “ tated, with a pulse at 120, and a dry
 “ husky cough. Eight drops of tincture
 “ of fox-glove were administered thrice a
 “ day, and increased by the 22d to thir-
 “ teen drops thrice a day, at short inter-
 “ vals. The pulse ranged from 55 to
 “ 65, but was never stationary for an hour
 “ together*. The heat and thirst were

* In the W. C. Contributions may be found a nu-
 merical statement of the pulse, under the full action of

“ gone. He complained of intolerable
 “ nausea and languor. These went off on
 “ substituting Griffith’s mixture for digi-
 “ talis with wine and animal food. De-
 “ cember 24, he pronounced himself free
 “ from complaint, and his strength was
 “ returning.”

On going to a different part of the coun-
 try, he experienced some return of his
 complaint. Another medical practitioner
 now judged his complaint to be *tabes me-*
senterica alone, and no digitalis was given.

“ In February he returned to Plymouth,
 “ with some degree of his former symp-

digitalis at different times of the day and night. I
 have since always found equal variation: so that
 what is commonly given as the rate of the pulse, only
 holds of a particular part of the day; or else I have met
 with patients of particular habit, which I do not be-
 lieve.

“toms. The digitalis was given for six
“days, with the same beneficial effects.”

The digitalis, however, was not at this time persevered in, probably on account of its severe operation. From the 6th to the 14th of March it was resumed, together with pills, consisting of equal portions of kali, myrrh, and vitriolated iron.

On the arrival of this patient at the Hot Wells, on the 23d of March, 1801, he was extremely emaciated; too weak to dress himself in a morning, and very languid through the day. He could not walk above a few hundred yards at a time on plain ground without fatigue. Some days he had chills and heats; and almost every night more or less of perspiration.

When I first saw him, there were no symptoms of pulmonary tubercles in an

active state, nor have any appeared since ; that is to say, he had no dry teasing cough ; he felt no pain in the chest, no difficulty of breathing, except upon exertion, and then it evidently arose from weakness,—no inconvenience from lying in any posture. His pulse was 120 ; and he was much subject to flushings.

As he had had slimy and frothy stools, as the belly was hard and tense towards night, as pressure on the abdomen gave pain, and as the emaciation continued, I judged this to be a case of *tabes mesenterica*. That there had been tubercles in the lungs, in an inflamed state, the history of the case appeared to me to prove ; and I believe that the medicines before taken had so far preserved the patient. But they had not, in any degree, lessened the symptoms imputable to the mesenteric

glands; and besides the articles particularized above, Mrs. Pattison tells me, that calomel was given at Callington for this express purpose.

The use of muriate of lime has increased the strength so much, that the patient is now perfectly able to walk from Clifton to Bristol, and back again. He rises alert, and feels strong all day. Those who have noticed him are struck with his improved appearance. There is no enlargement or hardness of the belly, nor pain upon pressure. The bowels are in a healthy state; the chills have entirely disappeared; the night-perspirations have decreased to occasional moisture upon the skin in the morning. The pulse is still too quick (about 100), and there has not been an acquisition of flesh, proportionate to his amendment in other respects.

About five weeks ago, a cause exciting vehement fear, began to operate upon him, and this recurred frequently for above a fortnight. His progress was evidently checked; and for prevention of the hectic fever, he had now fifteen drops a day of tincture of digitalis. This was, perhaps, excess of precaution. But the patient had improved so much, before the use of the digitalis, was so stationary during its exhibition, and has been so fast improving again since its discontinuance, as to make it evident that he is solely indebted to the muriate of lime for all the benefit he has received since he has been under my care. It seems to me equally certain, that the medicines he took before had made no impression on the diseased mesenteric glands.

The dose of muriate has generally been

from forty to sixty drops. Eighty drops have produced qualms and sickness.

These feelings have sometimes appeared in other patients, and I consider them as the sign of an overdose. One patient, ill of *tabes mesenterica*, with other glandular affections, has baffled all my endeavours to administer this medicine. The patient is a girl of eight years of age. She has been greatly harassed by abdominal pains and sickness. The sickness was so increased by the smallest quantity of the muriate, as to render it impracticable to persevere in its use. No vehicle could reconcile it to the stomach. The external application produced the same inconveniences; and on attempting to give some of the substitutes mentioned below, I was equally baffled. My proposal of a caustic or seton,

on some part of the abdomen, has not hitherto been acceded to.

The muriate of lime can by no means be considered as one of the more dangerous medicines. Yet from the analogy of barytes, and from its occasional nauseating effect, I supposed that in a strong and concentrated dose, it would produce a fatal action, on the stomach. To throw some light upon this point, I requested Mr. King to make the following experiment. The account of it is his.

“ March 24th, half past five P. M. I gave about three drachms and a half of calx muriata, *undiluted*, to a dog, about six months old, about two hours and a half after he had been fed. It affected him immediately with great violence, which appeared by quick breathing and snorting, convulsive, but vain efforts to vomit, and

a profuse secretion of saliva. He often fell to the ground, but rose again. About half an hour after taking the muriate he seemed expiring, and during the next half hour gradually recovering; but would not take any water, though it was frequently offered him. He continued from that time lingering, and in about six hours he died.

25th, I opened this animal, and found the whole of the thoracic viscera in a sound state. The lungs and diaphragm, however, were of a florid appearance, as might have been expected from the convulsive efforts excited in the latter organ. The stomach, externally, had no appearance of morbid alteration. The liver, also, looked healthy; the gall-bladder, and ducts were turgid, with an abundance of bile, of the usual taste and colour, with

many whitish *fæculæ* floating in it. The contents of the stomach, and the whole of the alimentary canal, were as might have been expected in a healthy dog, except about twenty small *tæniæ* which were found in the jejunum and upper part of the ilium.

The whole of the stomach, in its greatest convexity, was unusually thick. Towards the pylorus it appeared increasing in thickness rather beyond its healthy state, under similar distention. The villous coat was exceedingly bloodshot, even a great way down into the small intestines. In many parts it was almost black, and converted into a gelatinous slime, which could be taken off by the fingers with great ease. Neither the chyme nor chyle seemed in the smallest degree altered, by the muriate of lime, being perfectly insipid.

The chyle was very abundant, and many of the absorbents turgid; but all the mesenteric glands were large and very hard, and the thoracic duct appeared to contain scarcely any fluid. From the animal's emaciated state before the experiment, it should seem that these glands were previously diseased."

This experiment will induce the prudent practitioner to increase the dose with caution, and to dilute the medicine. Probably a drachm of the muriate should not be given in less than an ounce of water or other vehicle. One invalid, notwithstanding its disagreeable effect on the palate and fauces, and in spite of my remonstrances, took it undiluted.

The use of the muriate of barytes in scrophula has been a subject of experiment for a number of years; and though

aware that the history of that medicine, will, previous to trial, throw some disfavour on the muriate of lime, I am not deterred from recommending it by that consideration. The combinations of the alkaline earths, and of the alkalis with different acids, will readily occur as substitutes. Experiments on the effects of strontian, in comparison with barytes, shew that the salts of strontian may be very safely tried.

The experience of old medical writers gives me some faith in the salts, which they so much recommended as *deobstruents* in affections of the lower belly. My faith is strengthened by another consideration. As purges they probably produce an action, which is propagated to the mesenteric glands : given in a dose too small to produce any cathartic effect, they will

produce an action or excitement, which can be long supported, as being followed by no debility—an action which may be to purging what the cordial operation of fermented liquors is to intoxication ; and by this the glands may be brought to a healthy state.

It is certainly not by purging that muriate of lime cures *tabes mesenterica*, or any other scrophulous affection. I have scarce ever been obliged to lessen the dose on this account, but often to give aperients under its use.

A P P E N D I X.

(No. I.)

THE following paper was printed a year ago.

The observations are chiefly founded upon cases of patients who applied at the pneumatic institution. For it being impossible to give the poorer class an idea of the disorders which we wished chiefly to treat, they were promiscuously received; and have attended in great and increasing numbers. As we did not choose to send them away disappointed, the concourse gave occasion to numerous trials of digitalis and calx muriata, as also of some new and valuable chemical medicines, of which an account will soon appear, as also of the effects of nitrous oxyde in palsy.

Many of our consumptive, and other patients, Dr. Kinglake had the humanity to visit at their own houses.

T. B.

CASES AND OBSERVATIONS
ON THE
MEDICINAL EFFICACY
OF
DIGITALIS PURPUREA,
IN
PHTHISIS PULMONALIS,
WITH
SPECULATIONS ON ITS MODUS OPERANDI,
AND ON
ANALOGOUS REMEDIES.

By ROBERT KINGLAKE, M. D.

*Member of the Royal Medical Society of Edinburgh, of the American
and Göttingen Physical Societies, &c. &c.*

Venienti occurrere morbo.—*Horace.*

CASES & OBSERVATIONS
ON THE
MEDICINAL EFFICACY OF DIGITALIS PURPUREA
IN
PHTHISIS PULMONALIS.

INTRODUCTORY REMARKS.

TO suppose the ulcerated or confirmed stage of pulmonary consumption, even in rare instances, curable, is to estimate remedial power very highly; but to expect such an event often to occur, is to betray inadequate regard to the generally irreparable nature of the malady. It is by duly considering the various and often insuperable difficulties opposed to the cure of diseases like phthisis pulmonalis, that the efficacy of newly proposed agents can be correctly appreciated. It is both highly rational, and instructive, to entertain an inveterate scepticism on the supposed virtue of a recently discovered

medicine, nor should implicit belief be ever admitted but on the most incontrovertible evidence.

Various causes almost necessarily lead to precipitate and erroneous conclusions respecting the salutary powers of insufficiently tried substances, among which may be enumerated on the one hand, the prevailing want of adequate remedies, a laudable ardour for improvement, a benevolent zeal for the relief of the afflicted, and the allurements of novelty; on the other, an inflexible attachment to adopted systems, indolent preference for routine practice, a dread of innovation, and a negligent indifference for the advancement of the healing art—hence arise both the intemperate confidence, and commendation, the unqualified distrust and rejection often prematurely bestowed on new medicinal agents.

Much experience will be always necessary to ascertain even a general practical standard, by which to estimate the probable salutary effects of a medicine, the average mode and extent of its agency, and to discriminate under what

constitutional and morbid circumstances its specific operation * most advantageously obtains.

The materia medica does not possess a single article that has any just pretension to uniformity of effect. The occasional diversity of operation is referable only to dissimilar conditions of animal excitability. This difference, however, is often not apparent, and serves to attach to the inefficacy of the medicine, what strictly belongs to the motive powers of organic life.

Bark, opium, the various preparations of mercury and antimony, are among the medicines which produce the most undeviating specific effects; but the usual mode of action of these substances, is also subject in different circumstances to be much diversified, and occasionally even counteracted.

* By specific operation, is not here meant the absurd notion of infallibility, under fallible conditions; but a definite mode of action in given circumstances, e. g. such as obtains in the stomach by an emetic dose of tartarised antimony, or in the intestines, by a purgative portion of jalap; which cœteris paribus are determinate or specific effects.

Digitalis is indisputably a very active medicine, and fairly challenges the dispassionate trial of extensive application, but its reputation ought to be scrupulously founded on the suffrage of its aggregate effects, and not on particular instances of its curative operation ; nor should it ever be exhibited but as liable to the occasional inadequacy, and even noxious tendency, common to the efficiency of all powerful medicinal agents. It would be expedient successively to employ *digitalis* in the various forms of tincture, decoction, and infusion,* previously to relinquishing it as inefficacious.

In my experience, however, of the comparative effects of these several preparations, in no shape has it appeared to operate with equal certainty, and efficacy, as in that of tincture. The powder is liable to nauseate, and to become cathartic, after a short prosecution of its use,

* Does not the cautious inhalation of its aqueous vapour, detached by the boiling temperature ; or of its constituent principles decomposed, and rendered æriform, either by fumigation or destructive distillation, also deserve suitable trial ?

even in very limited doses; the infusion and decoction, possess also these inconveniences in a less degree, with the additional objection of having a tendency to prove diuretic, effects which seem to militate more or less strongly against its curative agency in pulmonary consumption.

In whatever form *digitalis* be administered, its specific effects will be best secured, and its inordinate operation most effectually obviated, by commencing with very small doses, and gradually augmenting them, as circumstances may indicate. The range of dose, from the smallest to the largest, and from the ages of five years to eighty, may be comprised, and exemplified, in the subsequent estimate.

A child, at five years old, may begin with five drops of the tincture, a tea-spoonful of either the decoction or infusion, and a quarter of a grain of the powder, which may be respectively given three times a day, in a suitable quantity of spring water; in like manner adults of all ages, may in general commence with ten drops of the tincture, a table-spoonful of either

the decoction or infusion, and one grain of the powder. By thus cautiously entering on its use, slowly increasing it, if neither nausea, vertigo, nor palpitation of the heart, should be produced, and diminishing it, if either of those inconveniences should arise, every age and temperament may be securely and effectually subjected to its full influence.

In the annexed Cases, the subsequent tincture, prescribed by Dr. Drake, has been almost uniformly employed.

℞ Feliorum digitalis purpureæ in pulverem crassum trit unc. i. Spiritus vini rectificati et aquæ puræ ana unc. ij. digere, sæpé agitans per horas xxiv. et cola.

That the tincture might not fail of being fully saturated with the active principles of digitalis, the duration of digestion here directed, has been extended to at least forty-eight hours; and experience has farther evinced that even then, its due strength will diminish by long keeping, if filtrated from the powder. It should therefore be preserved in the bottle in which it

is prepared, and carefully poured off only as it may be occasionally wanted, without rendering it turbid by agitation.

In the subsequent Cases, a close adherence to facts has been studiously regarded, and circumstances which appeared illustrative of any peculiarities attendant on the agency of digitalis, have been faithfully recorded, as practically useful.

With a view to render the results more conclusive, the digitalis has been almost invariably administered alone, a mode of procedure that cannot be too strongly inculcated in investigating the medicinal powers of a new agent.

Until the solitary efficiency of a medicine be fully ascertained, it is surely highly unphilosophical to embarrass and confound its distinct operation, by combination with other substances, or in such obscurity to attempt to determine when collateral aid may be requisite.

CASES.

CASE I. May, 1799. — MARY EMERY, aged about forty, mother of children, naturally of a strong constitution, healthy habit, and free from hereditary disposition to disease; began, upwards of three months since, to be sensible of thoracic ailment, under symptoms of increasing difficulty of respiration, urgent, short, hard cough, expectoration of a viscid greenish fluid, assuming, more or less, a purulent appearance, and occasionally tinged with blood, febrile heats and chills, evening exacerbation, night-sweats, loss of appetite, progressive emaciation, rapid declension of strength, with a pulse hard and small, at 90 strokes in a minute. She commenced the use of the tincture of digitalis on the 20th of May last, and continued it until the ensuing fifth of July; during which time, the subsequent appearances were periodically recorded, as most worthy of notice.

May 20—directed to take 15 drops three times a day, adding a drop to each succeeding dose, if no sickness should be produced, to eat but very small quantities of food at a time, resuming it at proportionably short intervals, to let it consist mostly of animal substances, particularly the yolk of egg well triturated to a smooth uniform fluid, with a strong infusion of the different kinds of flesh-meat, especially pork, to masticate slowly, and minutely, and to take nothing on the stomach requiring any great exertion of digestive power after the hour of five in the evening.

24th.—The tincture of digitalis, gradually augmented to 20 drops twice a day, has produced no nausea; cough less urgent, and hard, expectoration diminished, respiration more free, skin temperate, pulse 85, and firmer.

28th.—Complains of acute pain at the region of the heart, with occasional palpitation, which is sensibly augmented soon after taking the digitalis; no nausea, or any other symptom of inordinate operation; no amelioration of other morbid circumstances; pulse 90, hard, and

small, skin hot, and dry, increased debility; the tincture of digitalis suspended.

June 1st.—Pain at the heart, and palpitation cease to prevail, other symptoms nearly stationary; pulse 96; directed to resume the tincture of digitalis to the extent of 15 drops three times a day, taking the evening dose at about half an hour before the usual accession of febrile exacerbation.

4th.—Cough less violent and frequent; expectoration and respiration more free, appetite improved, evening febrile paroxysm greatly moderated, nocturnal restlessness and sweats much alleviated; pulse 90, equal, and more soft; tincture of digitalis taken under gradual augmentation, in doses of 25 drops three times a day.

8th.—The tincture nauseates, reduced to 15 drops three times a day; complains of much debility; pulse 95, small and weak.

12th.—Cough and expectoration augmented, acute pain renewed at the heart, increasing debility, pulse 96; tincture diminished to 10 drops three times a day.

16th.—General amelioration of symptoms; pulse 80, soft, full, and firm, countenance animated, appetite craving.

20th.—Continues progressively amending.

26th.—Symptoms of pulmonic affection nearly removed.

July 5th.—Scarcely any other complaint than general debility, sensibly yielding to a gradual restoration of natural strength.

In this case the tincture of digitalis eventually produced the most desirable success. It was undoubtedly an instance of phthisis pulmonalis, rapidly attaining that usually unyielding establishment, which characterises the last stage of pulmonary consumption, and which hitherto has almost uniformly proved, and probably will continue to remain, invincible, even to the most salutary powers of medicinal agency.

The maximum dose of the tincture of digitalis in this case, was 20 drops three times a day, beyond which, effects repugnant to curative tendency were produced.

Would not this patient have died without the restoring aid of digitalis ? I confidently believe, that no other known agent could have obviated that event.

CASE II. June, 1799. — REYNOLDS, by trade a Wheelwright, aged 31. Constitution radically robust, prevailing temperament*

* Much ambiguity is liable to arise in the ordinary indiscriminate mode of employing the terms constitution and temperament. These words, in physiological strictness, are in no respect synonymous. The former appellation properly implies the primordial or radical structure of the animal system; the latter, its active powers, or motive, evolutions; hence they stand in the relation of cause and effect, and are accordingly governed by appropriate laws.

If the elementary and constituent principles composing the animal fabric be in due number, proportion, and combination, both the constitution and its habitual mode of action or temperament, will be equally and correspondently healthy, and vice versa.

Occasional deviations in the constitution from the healthy standard, are cognizable only by the excessive, deficient, or modified action of the prevailing temperament. The visible configuration of the animal body is, as it were, only the outer parietes to the more interior and evanescent mechanism of vital motion. Thus no gross derangement

torpid, habit regular. In consequence of exposure to cold about 18 months since, became affected with loss of appetite, cough, expectoration of a mucous fluid, occasionally tinged with blood, soreness throughout the whole volume of the lungs, emaciation, transient febrile heats and chills, without any evident evening exacerbation, increasing debility, pulse 114; began on June 10th to take the tincture

of constitutional structure is necessary to the extinction of life; but that event can never happen unpreceded by more or less of disordered temperament.

A constitution naturally sound, is liable to an extensive range of morbid degeneracy, and is susceptible of regeneration; but when primordially defective, cannot be rendered perfect.

The existing temperament may be either native, hereditary, or acquired, and faithfully indicates the prevailing state of the constitution, though it does not elucidate its radical conditions.

Temperaments are generated by the constitution, and confirmed and rendered durable by habit. Temporary derangements of the constituent principles of the system, superinduce correspondently new motive susceptibilities on the existing temperament, which cease with the removal of the cause, without either supplanting, or permanently modifying it.

Different temperaments cannot co-exist, though the

of digitalis in doses of 15 drops twice a day, with immediate and progressive amelioration of the prevailing symptoms; he took at length, under gradual augmentation, 50 drops three times a day. Nothing worthy of diurnal or periodical detail occurred in this case. By the register kept of its progress, it appears that the dose was increased by the successive addition of one drop, that neither sickness nor any other inconvenience was produced, that the pulmonic affection became early and uniformly relieved by its salutary agency, that the pulse

motive influence of that which prevails may be variously evolved and modified in particular organs, according to circumstances of general and local disease, by which their respective functions may be impaired, and the established temperament become ultimately vitiated, and molested by morbid susceptibilities.

Every variety of constitution may be both generally and particularly exhibited by four different states of temperament, and their respective modifications; namely, the healthy, the morbidly strong and active, the morbidly weak and irritable, the morbidly exhausted and torpid. To the first class are to be referred salutary motions, to the second those of excessive strength, to the third those of direct debility, to the fourth those of indirect debility. Those of the two latter descriptions may be computed to exist in the enormous proportion of 99 to 100 of the two former.

was retarded, softened, and invigorated, that much benefit appeared to be derived from a close observance of the dietetic plan enjoined in the preceding case, and also from brisk friction on the regions of the stomach and

These distinctions are derived from the motive power of the constituent principles of the animal system, and not from an ideal redundancy of particular fluids, generated by sanguineous, phlegmatic, choleric, and melancholic temperaments, which probably have no existence in fact, and if they had, could be but effects, and not causes of temperaments.

These traditional prejudices in favour of humoral temperaments, have been however, without examination, recently adopted by two respectable foreign authors, as follow: Lason in his *Philosophie Medicale*, page 261, treating on diversity of temperament, observes " Or, l'ensemble de ce désordonnement, est ce qu'on désigne par le nom de temperament; c'est ainsi que l'exuberance native d'actions et de fonctions physiques et vitales du système artériel, du système veineux, du système hépatique, du système lymphatique, &c. déterminent dans certains individus des temperamens qu'on appelle, ou sanguins, ou mélancholiques, ou bilieux, ou phlegmatiques," &c.

Plenck, in his *Hydrologia humani corporis*, page 37, on the uses of the blood, remarks, "*Temperamentum humorum constituit. An in temperamento sanguineo principium cruorofum, in phlegmatico albuminosum, in cholericico biles-cens, in melancholico carboneum abundat.*"

thorax, previously moistening the surface with the tincture of digitalis. This patient now pursues his daily labour, possesses his natural strength, has regained his lost flesh, and has no other symptom of indisposition remaining than that of a slight cough, which is also daily diminishing.

It may be worthy of remark that this man had undergone a diversified course of medical treatment previously to taking digitalis, and that this medicine, instead of disappointing his hopes like every thing before tried, exceeded his most sanguine expectations, and made him confident of its superior and decided efficacy. No delusion could have had any influence in this case.

CASE III. June 20th, 1799. — Os-
MOND, by occupation a Newscarrrier; a middle
aged man, of slender stature, and morbidly
irritable temperament, had contracted violent
catarrh from exposure to cold. After the ex-

piration of a fortnight his complaints assumed a more pulmonary character ; urgent dry cough, obstructed respiration, febrile heats and chills, evening exacerbation, night-sweats, loss of appetite, extreme debility, with a pulse at 100, hard and small, supervened.

He was directed to take fifteen drops of tincture of digitalis twice a day, and gradually to augment the dose ; he was also enjoined the use of a nutritious diet. Not more than twenty-five drops of the tincture could be borne without inducing nausea. In the course of one week he became much relieved, and in a fortnight he was so far without complaint as to be regardless of further attention to recovery.

Though this case has no pretension to be classed with the more advanced and inveterate forms of phthisis pulmonalis, yet it threatened most alarmingly to become so, through either neglect or inefficient medicinal treatment. The effect of digitalis therefore, in this instance, proved a preventive benefit, but little inferior to positive remedy.

CASE IV. June 26th, 1799. PETER FERREL, aged 50, had been for several years periodically affected with pulmonary complaints, which were considered as asthmatic, but which more probably arose from tubercular derangement of pulmonic structure, was lately attacked with extreme difficulty of breathing, unusually violent cough, scanty expectoration of a fluid, wearing a viscid purulent aspect, and occasionally mixed with blood, loss of appetite, febrile paroxysms, night-sweats, pulse 90, hard and full.

He was directed to take fifteen drops of tincture of digitalis twice a day. In the course of one week the symptoms were much alleviated; the dose was then ordered to be gradually increased, until it should attain the extent of thirty drops three times a day, if not previously contra-indicated by the production of sickness; it was borne in that quantity without incon-

venience, and after persisting in its use in all about three weeks, so much benefit was obtained as to induce the patient to think himself comparatively recovered from his long standing complaints. He still continues the medicine, and if the progress of the future may be estimated by that of the past, sufficient ground exists for presuming on an ultimate cure.*

CASE V. July 14th, 1799. HENRY HILLMAN, aged about 25, of a weakly constitution, morbidly irritable temperament, narrow chest, and phthifical visage, had been ill about six weeks (when he applied to the pneumatic institution) with short, dry, urgent, cough, transient pain in the chest, febrile heats and

* This patient prosecuted the use of digitalis during nearly five weeks from the above period, when his pristine health did not indeed appear to be fully restored, but his remaining complaints becoming too slight to interest his further attention, he discontinued his attendance, and resumed his accustomed labour.

chills, sense of extreme heat in the soles of the feet, towards the evening, much general debility, pulse 132, small, weak, and hard. Under these circumstances it was judged proper to commence the use of digitalis, ten drops of the tincture of which were accordingly directed, and ordered to be gradually augmented, if indicated.

On the 27th, the dose was advanced by slow progression to twenty-seven drops three times a day, without inducing sickness; no benefit however accrued to the cough, but the febrile chills and heats were removed, and the appetite rendered insatiably keen; no sensible variation in the pulse.

On the 31st, thirty drops were taken, but not without nauseating. The pulse was now reduced in frequency to 112, but retained its weakness of stroke.

The dose of tincture was diminished to 20 drops, which continued to sicken; the pulse fell to 96, but remained small and feeble.

The digitalis was persisted in until the 11th

of August, when the stomach could no longer endure its impression, and the prevailing general debility seemed to be rapidly increasing under its effects ; it was therefore exchanged for the tincture of broom, which was at first exhibited with similar precaution in regard to dose, to that in which digitalis has been employed. Not more than ten drops three times a day were at the commencement directed, but it was at length found that two tea-spoonful produced no sensible effect ; three induced sickness. This tincture was continued till the 13th of October, in the average doses of one tea-spoonful three times a day. The patient amended gradually from the time of discontinuing the digitalis, and on the 13th came gratefully to acknowledge his cure, which indeed appeared to be most perfect.

To what power does this patient owe his recovery ? The digitalis relieved him speedily, nor was the ground gained under its agency lost, when it was discontinued from becoming intolerable to the stomach. The prosecution

of it under such circumstances would probably have been irreparably mischievous. Did the broom afford more than negative service in withholding the positive injury arising from the employ of the digitalis ; or does broom possess properties analagous to those from which the occasional efficacy of digitalis results, in relieving and curing phthifical affection ? A satisfactory solution of this question can only be obtained by further trial of the effects of broom in pulmonary consumption.

In two other cases in which it has succeeded the inefficacious employ of digitalis, no sensible benefit has been derived from it, which inclines me to believe that the instance under consideration is more indebted to the continuous, though distant effect of digitalis, than to any original, or superadded aid from the broom.

CASE VI. August 21st, 1799. SARAH CHESHIRE, aged 18, of a weakly constitution, morbidly irritable temperament, slender structure, fair complexion, dark hair and eyes; several of her family have died of pulmonary consumption; has been gradually declining in health nearly twelve months, under the various symptoms of short, urgent cough, mucous expectoration, difficult respiration, febrile heats and chills, irregularly recurring, pulse 92, small, weak, and hard. Under these circumstances a course of digitalis was entered upon in doses of ten drops of the tincture three times a day, directing it to be gradually augmented, if not countermanded by sickness.

September 4th. Respiration more free, cough and expectoration diminished, febrile chills and heats less distinct, and more transient, pulse 90, soft, full, and regular; takes eighteen drops of the tincture of digitalis three times a day, without sickness.

17th. Amends progressively in all respects; pulse 90, soft, full, and firm; dose of the tincture of digitalis slowly extended to twenty-five drops three times a day, without inducing any inconvenience.

October 13th. Perfectly free from all pulmonary affection; has continued the last mentioned dose of the tincture of digitalis until this time; complains of occasional sickness, in other respects in full enjoyment of natural health; digitalis discontinued, and the patient dismissed as cured, with an injunction to return for further advice if the slightest relapse of symptoms should occur. More than a month is now elapsed without any application having been made, from whence it may be inferred that her recovery has proved permanent.

This case affords a singularly brilliant instance of the curative effects of digitalis in the tubercular stage of phthisis pulmonalis, accomplished as speedily as commodiously. It also records a rare, but not solitary example, of its salutary agency fully obtaining, without a sensible re-

tardation of pulse. It held uniformly at 90, and was affected only in being changed from hard, small, and weak, to soft, full, and firm, an alteration which appears to me to be a *conditio sine qua non* of the beneficial efficiency of this medicine.

CASE VII. September —, 1799. —

GREEN, aged 18, constitution radically robust, existing temperament morbidly irritable, has been indisposed upwards of six months, with hard, dry cough, oppressed respiration, stricture and pain across the chest, loss of appetite, flesh, and strength.

September 11th. Commenced the use of the tincture to the extent of ten drops twice a day, when difficulty of respiration, pain on inspiration, much general debility, urgent cough, pulse 120, hard, weak, and small, prevailed.

17th. Respiration more free, cough and pain on inspiration much alleviated, pulse 94,

softer, more full, and firm ; directed to take ten drops of the tincture of digitalis three times a day.

20th. Pulmonic complaints vastly ameliorated, pulse stationary, entire loss of appetite ; ordered to continue ten drops of the tincture of digitalis in a tea-cupful of infusion of quassia wood three times a day.

October 2d. Has persisted regularly in the use of the medicine last prescribed ; has regained his appetite, and has not a trace of his late formidable malady remaining. He attended this day with a countenance beaming with hilarity and gratitude, to acknowledge his perfect recovery.

This case classes with the last detailed, with respect to the uniformity and rapidity with which digitalis produced its most salutary effect. The pulse was in this instance, indeed, somewhat retarded, but did not sink below 94, during the most efficient agency of digitalis.

It has occurred to me repeatedly, to remark (as in the present instance) that digitalis some-

times induces a total failure of appetite, attended with a sense of indescribable vacuity at the stomach, but unaccompanied by sickness, and that under such circumstances, conjoining the tincture of digitalis with an infusion of either quassia, chamomile flowers, or ginger, occasions it to act most efficaciously in reinstating the natural and digestive powers of the stomach.

CASE VIII.* May 13th, 1799. **DANIEL HANSDEN**, aged 50, by occupation a coachman, naturally of a strong constitution, prevailing temperament torpid, has been suffering upwards of one year and half under pulmonic affection, characterised by hectic fever, cough,

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purulent * expectoration, difficult respiration, acute pains occasionally darting in different directions through the lungs, emaciation, &c. This case proceeded in so rapid a course of deterioration, as to be abandoned by those of the faculty who attended its earlier stages, as hopeless, and verging on its fatal termination. He began taking the tincture of digitalis to the extent of fifteen drops twice a day, gradually augmenting it to thirty drops three times a day, to which were conjoined a nutritious diet, and the frequent use of external friction on the regions of the stomach and thorax, previously

* The familiar mode of distinguishing pus from mucus, by agitating the expectorated fluid with water, was repeatedly tried. It was invariably found to be readily diffusible, but after standing a few hours, it subsided in the form of a flocculent precipitate. This is a criterion of purulency. Had it been mucus, it would not have been so easily miscible with water, but when blended, would have remained in permanent solution with it; hence the characteristic difference is, that pus mixes but mechanically, mucus chemically, with aqueous fluids. Neither the acid nor alkaline tests were judged necessary to be employed.

wetting the surface with tincture of digitalis. Not a week had elapsed before the symptoms were greatly ameliorated, fever being wholly removed, pulse reduced to 50, soft, full, and firm, cough less frequent, expectoration diminished, free and unirritating, appetite and strength much improved; this salutary change was progressively pushed by the continued good effect of digitalis, even to a degree of amendment that warranted a well-founded hope of an eventual cure; but after the use of the medicine for about two months, it seemed to do no more than arrest the progress of the disease, and the system appeared to be, as it were, so fully saturated with its impression, as to be incapable of enduring the additional agency of more than eight drops, without inducing nausea; ten would excite even vomiting.

The amendment obtained fell but little short of cure; it remained stationary for nearly one month, when, apparently for want of adequate reinforcement to further and confirm the advantage gained, the former situation relapsed, threatening speedy dissolution.

Neither the tincture nor infusion had now any effect, in either retarding the pulse, or in repressing the increasing severity of the other symptoms. In this wayward state, the event of death (which is probably not distant), can alone afford relief.

This case offers valuable evidence in proof of the powerful agency of digitalis in arresting the progress even of the last stage of phthisis pulmonalis, and that probably under the least controllable circumstances of general debility, and organic læsion.

If a new agent, of analagous powers, had been applied when the digitalis ceased to act salutarily, might not a cure have been accomplished?

CASE IX. May, 1799. BERNARD WATKINS, aged about 50, of a morbidly irritable temperament, and of that peculiar visage and bodily structure, which but too truly denote

phthifical tendency, began in the last stage of pulmonary consumption, slowly, fully, and inveterately formed, to take tincture of digitalis in doses of fifteen drops twice a day; in less than a week the pulmonic affection was much alleviated, by which the patient's general feelings, appetite, nocturnal rest, and strength, became so greatly improved as to inspire him with confident hopes of recovery. The prosecution of the medicine, however, soon induced nausea, and augmented secretion of urine, to which ensued great prostration of strength, colliquative sweats, and diarrhæa, under which he sunk, perfectly exhausted.

No benefit resulted from the digitalis in this case, after the production of nausea, and diuresis, obstacles to its efficacy which have occurred to me to observe in several other instances.

CASE X. May — 1799. SARAH GILL, aged about 35, naturally of a weak constitution, existing temperament morbidly irritable; had

been several months labouring under phthisis pulmonalis, apparently of the scrophulous description, when she commenced the use of tincture of digitalis; it was given under gradually augmented doses, from fifteen drops twice a day, to fifty three times a day, during three months; for the first six weeks more than stemming the progress of the disease, even much promising amendment was produced, when it began to nauseate, and abundantly to augment the urinary secretion, after which the pulmonary affection resumed its morbid course, and is now rapidly tending to a fatal issue. Neither the tincture nor decoction of digitalis has since had any effect in ameliorating or repressing the pulmonic malady.

This is another case in proof of the salutary, though inadequate efficiency of digitalis, under the most unfavourable phthisical circumstances; and farther evinces the propriety of diligently searching for auxiliary agents.

CASE XI. June 20, 1799. — BRADFORD, a middle aged man, of a tall thin stature, and naturally of a robust constitution, had been ill upwards of a year, began to take the tincture of digitalis under symptoms too unequivocally indicative of the tubercular state of phthisis pulmonalis, to need particular detail. It was exhibited as usual, gradually augmenting the dose until nausea was produced; at first (as almost uniformly in other cases) it operated salutarily, rendered the pulse softer, slower, and firmer; but after persisting in its use about a fortnight, it excited distressing sickness; when it ceased to have any other effect than that of slightly increasing the urinary secretion, the medicine has consequently been discontinued as useless.

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Did not in this case the renal determination of the influence of digitalis obviate its effect on the lungs?

CASE XIII. June 23d, 1799. ———

WITTAKER, a middle aged woman, of extreme constitutional debility, and proportionate morbid irritability of temperament, has been during these several months harraffed by the most inveterate symptoms of phthisis pulmonalis, with a pulse running almost uniformly at the rate of 150 in a minute, small, and hard, has

progreß, to range so high as the usually denominated febrile heat. Is not radical heat, whether it be a substance or property, uniformly deficient in diseases of debility, and is not the seemingly excessive heat under febrile exacerbation in those instances, rather the effect of morbid and delusive sensibility, than real augmentation?

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taken tincture of digitalis during two months, in very small doses, such as five drops three times a day ; it could not be borne in larger quantities ; eight drops even induced distressing sickness, and violent vomiting ; no advantage whatever resulting from its use, it has been discontinued.

This is a solitary instance in my experience, of the stomach being too impregnable by digitalis to admit of employing it in a sufficient quantity to act on the lungs. It is a case of idiosyncrasy forming an exception to the general mode of its operation.

Children of eight years of age have taken it in the form of tincture, to the extent of twelve drops three times a day, without inducing either the smallest derangement of stomachic excitability, or the least constitutional inconvenience.

CASE XIV. June 26th, 1799. ELIZA
PIERCE, aged 24, of a weakly constitution,

has been ill about one year, during which time her disorder appears to have passed the catarrhal and tubercular stages of phthisis pulmonalis, and finally, to have fully reached the fatal extent of the ulcerated form. In the most aggravated circumstances of hectic fever, cough, purulent expectoration, difficulty of respiration, colliquative sweats, diarrhæa, &c. signal benefit has been afforded by the tincture of digitalis. It has been exhibited in doses from fifteen drops twice a day, to fifty three times a day. The regions of the stomach and thorax were also directed to be moistened every four hours with the tincture, and the surface to be afterwards well rubbed with a flesh brush. The patient ascribes the restoration of appetite, and the comparative freedom of breathing which have been acquired, chiefly to its employ, and is solicitous even to have shortened the intervals of its renewal.

After continuing considerably amended for about two months, during which time the digitalis was uninterruptedly employed, no

further progress could be effected, and the ground gained daily receded, until nearly the former state of the disease resumed its threatening ascendancy. A different form of digitalis (the infusion) was now tried, but without any sensible effect.

Unwilling to abandon even so forlorn a case, an infusion of black henbane (*hyoscyamus niger*) was directed, on the principle of its possessing properties analogous to those of digitalis. One spoonful of a saturated infusion, consisting of four ounces of the recent leaves, digested during twenty-four hours in one quart of boiling water, was borne without inconvenience. The dose was gradually increased to three spoonfuls, which produced a grateful sense of warmth in the stomach, and had obviously the further effect of inducing salutary composure during the night.

The prosecution of the medicine convinced the patient that much sensible relief was derived from it; in my own judgment, however, the apparent benefit was equivocal. The occasional

alleviation seemed more justly to appertain to the fluctuating amendment often spontaneously obtaining in the last stage of pulmonary consumption, than to any distinct effect of the agent employed. Four spoonful of the infusion could not be borne in one dose, without inducing sickness, attended with a slight vertiginous sensation.

The use of this medicine has now been pursued about six weeks, during which time the patient has remained nearly stationary, has passed uniformly less disturbed nights than before, and is extremely reluctant to having it exchanged for any other agent.

CASE XV. September —, 1799. WILLIAM COWLEY, naturally of a robust constitution, existing temperament torpid, in the ulcerated stage of phthisis pulmonalis, of three months duration, consequent on pleuritic inflammation. The symptoms were those usually

characterising the last stage of pulmonary consumption, nor was the dismal catalogue, indeed, ever more hopelessly filled than in this case. To bloody, purulent, and fetid expectoration, were added urgent and painful cough, much general debility, rapidly increasing, pulse 130, hard, weak, and small, colliquative night sweats, and occasional diarrhæa.

September 11th. Commenced the use of the tincture of digitalis, in doses of ten drops three times a day, and continued under gradual augmentation till October 6th, when twenty-six drops were taken three times a day, with occasional tendency to sickness. During the latter part of this time the symptoms became much ameliorated, the pulse was rendered more soft, full, and firm, but not sensibly reduced in frequency, cough less violent and painful, expectoration more white, uniform, and tenacious, without any bloody admixture for several days, respiration more free, appetite improved, diarrhæa checked, and night-sweats moderated; all which seemed to warrant the patient in confi-

dently expressing a promising sense of amendment; but here, as in every other case of a similar description under my observation, the ne plus ultra point of relief appeared to be immoveably fixed, nor did the alleviation obtained remain long stationary; the short lived advantage was soon lost, and the patient, in the course of a few days, relapsed into the deadly situation from which the salutary agency of digitalis had temporarily emancipated him. Digitalis was now superseded by the use of broom, and other agents, but with no other effect than that of proving their comparative impotency in restraining, or even palliating, the fatal career of the malady.

OBSERVATIONS.

It would be superfluously tedious to narrate every instance that has presented of the last, or ulcerated stage of phthisis pulmonalis, in which digitalis ultimately failed to effect a cure.

That event indeed not having happened on any occasion in the numerous trials which have been made of its efficacy, both at the medical pneumatic institution, and elsewhere, under my direction, necessarily suggests that some unexplained, but essential difference, must have existed between the cases affirmed to have been cured by its operation in the practice of others, and those under my own observation, in which it has uniformly and unequivocally proved inadequate to producing so salutary an issue.

My experience, it may be presumed, justifies

me in averaging the curative efficiency of digitalis in the tubercular stage of pulmonary consumption, in the proportion of one to three, while in the ulcerated period of its advancement, no documents have been afforded, on which could be calculated even the remotest chance of cure.

The precise line of demarcation between the tuberculous and ulcerous stages of phthisis pulmonalis, can at best be but imaginarily drawn, and never practically exhibited. The symptoms which characterise the latter period of the tubercular stage, also usher in without sensible variation, that of the ulcerous ; but the respective sources of the evil are nevertheless widely different ; in the former, a fluid apparently of the worst purulent properties may be secreted by the mucus vessels of the tuberculous parts, without læsion of structure ; in the latter, the expectorated matter is generated by an ulcerative process, tending incessantly to engender and disseminate its destructive influence ; thus the termination of the second, and com-

mencement of the third stages of pulmonary consumption, are so intimately blended, as to be perpetually liable to be confounded and mistaken for each other, and that they are in fact often misunderstood, the discordant results of similar treatment, more particularly of the employment of digitalis, sufficiently confirms.

The probability of effecting a cure in the last stage of pulmonary consumption, can only be inferred by the duration and severity of the concomitant symptoms; the possibility of obtaining that event must depend on the degree of systematic and local injury induced.

When radical derangement of the constitutional and temperamental conditions necessary to life and health, have gained a progressive ascendancy, and have so far predominated on the lungs as to have induced positive decomposition of structure, continuing and propagating the diseased motions by which that effect was produced, the measure of incurability may be said to be completely filled. To restore, in such circumstances, would be to create anew,

a process connected with generative, and not with destructive laws.

The preceding cases appear to demonstrate, that among the more striking peculiarities attendant on the agency of digitalis, may be enumerated the following :

That it proves most salutary in phthisis pulmonalis, when it speedily impresses the system at large by diminishing the hardness and frequency of pulse, and augmenting its strength and fullness, without inducing either nausea, vomiting, purging, increased flow of urine, or any undue excitement.

That when any inordinate operation is not manifested by an augmented action on either the first passages, the kidneys, or brain, it is usually exerted on the heart and lungs, inducing painful palpitation, stricture, and anxious respiration.

That when the system has been fully impressed with its influence, it becomes (contrary to what obtains in the habitual use of most other stimulants) more susceptible of its agency, re-

quiring the dose to be considerably, and often progressively, reduced.

That when it retards the frequency of the pulse, it proportionably augments its force, removes the peculiar resisting hardness of stroke which characterises visceral ailment, and induces more or less of somnolency.

That its salutary operation in diminishing the frequency of pulse, and ameliorating other hectic symptoms, is much assisted and extended by nutritious diet, employed in very small quantities, at short intervals, moderating or wholly abstaining from its use after the hour of five in the evening, on account of the recurrence of the natural or morbidly exacerbated febrile paroxysm about that time, tending to disturb the process of digestion, to oppress the stomach, and by diseased associated motions, so to harass the lungs with cough, and difficulty of respiration, as to render the ensuing night sleepless and debilitating.*

* This important, but too much neglected rule in the practical treatment of febrile affections, has been acknow-

That morbid heat diminishes, under its influence, in proportion as the pulse becomes less frequent, more soft and firm; a pulse at 50 being usually connected with a temperature from 90° to 95° of Fahrenheit's thermometer.

That external friction briskly performed by means of a flesh-brush, during ten or fifteen minutes, and repeated every three or four hours, over the regions of the thorax and stomach, previously moistening the surface with the tincture of digitalis, forwards its good effects.

That it seems to be more beneficially exhibited in small doses, at proportionably shorter intervals, than in larger quantities at longer distances.

That it may be given at about half an hour before the usual recurrence of febrile paroxysm,

ledged and recommended from remote antiquity. "In exacerbationibus, cibum refugete oportet, exhibere enim noxium, et quæcunque per circuitus ingravescent, in ipsis accessionibus reformidare oportet."

HIPPOCRATES.

more particularly before the evening exacerbation, with advantage, in either moderating, or wholly preventing its accession.

That its salutary effects have not in general been promoted by temporarily suspending and resuming its use, on the contrary, its uninterrupted prosecution has appeared essential to its eventual and permanent efficacy.

Finally, that the best effects may be confidently expected from its due administration in the catarrhal and tuberculous periods of phthisis pulmonalis, but that the last or ulcerated stage of that malady, though repressible by its salutary influence, will in general, perhaps invariably, require either the co-operative aid, or successive substitution of analogous agents, to accomplish a cure.

To afford the most distant prospect of realizing this grand desideratum, it will be of the utmost importance duly to consider, that this inveterate advancement of phthisis pulmonalis is essentially founded in a deep and general decay of constitutional power, and that however the real

systematic character of this disease may be occasionally disguised by morbid preponderance on the lungs, yet the true indication of cure will, nevertheless, invariably consist in restoring strength and energy to the enfeebled and degenerated state of the system at large.

This previous requisite seems to have been strangely overlooked by the more strenuous advocates for the efficacy of digitalis in pulmonary consumption. In anxiously regarding the local state of the lungs, they appear to forget that the source of that mischief exists in a universal morbid excitability, generated by vitiated processes, resulting from an undue vital arrangement of the various elementary and constituent principles of animal matter. The diseased lungs form but a small portion of the entire malady. Every fibre participates in the default of salutary agency, nor can a cure be expected but from a general regeneration of those alternate animo-chemical combinations and evolutions of principles necessary to animal health ; the reasoning therefore employed in explaining the beneficial

action of digitalis, in effecting absorption of matter, is mis-spent in attempting to make the curative operation consist in remedying an effect only, leaving the cause unregarded.

The fact is, that in real phthisis pulmonalis, no radical amendment ever accrues to the lungs but through the medium of the system at large. Improved appetite, digestion, and strength, invariably precede durable alleviation of pulmonic distress; moderate stimulation, therefore, chiefly resulting from a well conducted plan of nutritious diet, should be uniformly a leading agent in the intention of cure.

It is indeed questionable if matter discharged from an ulcerated surface be ever constitutently absorbed or impelled into the lymphatics; if so, every ulceration on the superficies of the body, as well as in the structure of the lungs, should prove a source of purulent contagion to the system generally; it is more probable, that it is previously decomposed and enabled to escape under the form of its elementary principles, whilst the regenerated action of the surface

from whence it was secerned, progressively approximates the subsequent secretion to the lubricating properties of healthy mucus. Nor is adequate proof existing, of fully formed tuberculous tumefactions on the lungs being wholly dispersed, even by the process of gradual decomposition, much less by the senseless power of demolition and deglutition, absurdly ascribed to the lymphatics. It is more reasonable to suppose that the indurated glands and cellular membrane in the bronchial structure are so far deranged and disfigured by the creation of new vessels, as to be equally incapable of specific destruction, or to serve any useful organic purpose ;* the vessels supplying them with nourishment, therefore, participating in the returning health of the neighbouring structure,

* Do not the lymphatic glands act as assimilating organs to the lymph diversified by accidental mixture and decomposition, in its reflux from every part of the system, analogous to the probable use of nervous plexuses or ganglions, in modifying and propagating cerebral sensibility, and to the influence of the different irritable viscera, in specifically appropriating and disseminating stomachic excitability ?

sustain, and as it were, insulate the newly secreted substances, by which they remain mostly stationary, similar to indolent excrescences, such as encysted tumours, and warts on the surface of the body.

The dissection of a case which occurred to me recently to witness, tends to confirm the truth of this opinion. It was an instance of a patient who died of hydrothorax, consequent on phthisis pulmonalis, to whom digitalis had been given by the advice of an eminent physician, under circumstances that clearly indicated the last stage of pulmonary consumption, and with effects indeed more unequivocally and extensively salutary than the practitioner alluded to had noticed in any other case;* in fact, the amendment was so considerable, that the patient was thought to be rescued from all impending danger.

The benefit, however, did not prove permanent, at least the former symptoms were soon

* Vide Essay on Consumption, by Dr. Beddoes, 2d. Edit. pp. 301—2.

exchanged for those of hydrothorax ; large quantities of serous fluid were repeatedly evacuated from the interpleuritic cavity of the thorax, by means of a trocar, with but temporary alleviation.

On examining the state of the lungs after death, they were found almost universally tuberculated ; the knife could scarcely pass in any direction without meeting an audible resistance.

If the singularly good effect of digitalis in this case had resulted from the dispersion of tubercles, it is hardly possible that the lungs could have been again so speedily overwhelmed with them.

As before observed, the influence of digitalis had probably so far amended the morbid excitability of the system, as to render the lungs unsusceptible of diseased impressions, from the presence of the contained tubercles.

In addition to this fact it may be observed, that tuberculous indurations are often found in the lungs of animals slaughtered in the highest health.

It has also occurred to me to remark them in dead bodies, in which no symptoms of pulmonary affection prevailed during the mortal disease.

It would be well worth the attention of medical practitioners, to embrace every opportunity that might present, of inspecting the lungs of patients after death, who have been cured of the tuberculous stage of pulmonary consumption, either by digitalis, or any other remedy. In such investigation, the presence or absence of knotty tumefactions would go to solve the doubt in question.

The natural provision for respiration is prodigiously great in the bronchial structure of the lungs, the design of which seems to be to secure the oxygenous principle of atmospheric air adequate access to the blood, in cases of temporary obstruction, or permanent obliteration of portions of the bronchiæ; and this may be borne, indeed, with comparative impunity, when it is merely mechanical, and not the result of morbid excitability, such as obtains in

pulmonary consumption ; in the latter case an undue equilibrium of vital principles pervades every fibre, and necessarily renders every motion diseased.

It occasionally occurs in pulmonary consumption, that three fourths, at least, of the whole volume of the lungs, are so enveloped in tuberculous, ulcerous, and adhesive distemper, as to be apparently impervious to air, and consequently unfit for respiration ; but more generally the systematic disease destroys life before the local derangement attains an inevitably fatal extent.

The febrile or hectic commotion which harasses, more or less, every stage of this malady, appears to be of constitutional origin, and to be the necessary effect of morbid motions generated by the prevailing vitiated processes of animal life. It sensibly pervades, agitates, and enfeebles the system, previously to its predominant influence on the stomach and lungs, being announced by indigestion and catarrh. In the ulcerous period it is usually much aggravated

by the increased degree of pain arising from the concussive violence endured by the lungs in the almost incessant act of coughing.

There is not sufficient evidence for believing that either the influence of the oxygenous principle of atmospheric air in forming chemical compounds on the surface of the sore, or that inhalation of the secreted fluid obtains to any noxious extent.

The frequency and durability of the febrile paroxysms, as it were, barometrically denote the prevailing degree of general debility, and local irritation on the lungs ; consequently, an occasional truce with the former is invariably both preceded and accompanied by a mitigation of the latter.

SPECULATIONS
ON THE
MODUS OPERANDI
OF
DIGITALIS, &c.

Although the discovery of remedial powers in a medicinal substance be of primary importance, yet its practical advantages must necessarily be limited, and often perverted, without duly ascertaining the principle of its salutary action, the mode and extent of its effects on the systematic excitability, whether that vital property be generally, or partially affected, whether the effect produced result from communicated, or excited energy, inducing excessive, modified, or deficient motions, or finally, what are the precise conditions necessary to the specific efficiency of the agent.

Without correct ideas on this subject, it will be frequently impossible adequately to co-operate in the intention of cure; the collateral benefit derivable from analogous powers will be precluded, and especially the auxiliary advantage of suitable diet and regimen, will be lost: hence arises the vast moment of founding the efficacy of medicinal agents on such a physiological explanation as may be the least liable to objections. As all practical theories should be exclusively deduced either from direct facts, or the close analogies which they afford, it would seem allowable to suspect the validity of those which have been recently proposed, in elucidation of the mode in which digitalis exerts its curative agency in general, and particularly in phthisis pulmonalis.

It has been assumed in the opinions in question, that it at once specifically excites the contractile power of the lymphatics, and diminishes that of the heart and arteries.

This postulatum is founded on the facts of its retarding the pulse, and its influence in the

probable removal of tubercles, and morbid affluxions on the lungs.

Is it just to infer, that restraining a morbid celerity of propulsive motion in the heart and arteriēs, is the effect of diminished power ? and can it be satisfactorily admitted, that the same agent is capable of affecting the arterial and lymphatic excitability oppositely ? The retardation of pulse, which obtains under the salutary agency of digitalis, is similar to what results from an invigorating effect of bark, opium, wine, nutritious diet, refreshing sleep, mental tranquillity, convalescence, progression from infancy to puberty, warm bath, and other situations of equally and uniformly high temperature.

On these several occasions the reduced frequency of pulse is not accompanied with a diminution of active energy, on the contrary, the action of the heart and arteries is rendered stronger, and the pulse sensibly fuller, their parietes are more nearly approximated by every systole, and proportionably dilated by every

succeeding diastole, with which are inseparably connected, augmented strength and slowness of pulsation, and also the transmission of a larger quantity of blood through the sanguiferous system in a given time, than could be circulated by a comparatively rapid, small, and weak state of arterial action. Hence it may be inferred that digitalis, in retarding the pulse, operates on the principle of a stimulant power, and produces its curative effects in diseases of general debility, by specifically affecting the motive powers of life, in a manner peculiar to its active properties. Nor does its efficacy in retrieving local derangement of structure originate from its supposed contrasted power of abating the contractile energy of the exhalants, and exciting that of the inhalents or lymphatics.

To this hypothesis may be opposed the facts, that no experiment has yet ascertained the existence of a contractile power in the lymphatic vessels,* and the apparent physical impossibility of such an effect.

* The apparent shrinking or corrugation of the lymphatic, on the application of sulphuric acid, is not a contractile,

The extremely slender, pellucid, polished, and valvular structure of the lymphatics, eminently fits them for the office of passive carriers of the exhalant fluid, and renders them totally incapable of either exerting or sustaining contractile action. The aggregate propulsive force arising from the healthy arterial and muscular action uniformly directed and concentrated on the open mouths of the lymphatics, is fully adequate to urging and perpetuating the lymphatic circulation. Such, indeed, is the extent of this force, that were it not for its gradual expenditure in transmitting the venous and lymphatic fluids through their respectively inactive tubes, the reflux circulation would be propelled too rapidly to allow sufficient time for the various combinations, decompositions, and nutritive depositions to obtain, which are necessary to health and life, consequently speedy

but a chemical effect, resulting from incipient decomposition of its structure. Chemical agents, indeed, must on all occasions be inconclusive tests of the primordeal conditions of vital motion.

emaciation, exhaustion, and death, would inevitably ensue.

The supposition that the lymphatics are contractile, and susceptible of being acted on by agents similar to the muscularity of the arteries, is founded on the loose analogy of their being alike transmitting tubes, though destitute of every other resemblance that could warrant such an inference. With equal propriety may the nerves be said to be contractile, though not possessing a vestige of structure requisite for that effect.

A nutritive motion, indeed, goes on in the coats of the lymphatics, in common with every other part of the system, but this is infinitely too recendite to be mistaken for tubular contraction.

If the organic fabric of the lymphatics be incompatible with progressive contraction, and challenge the possibility of either direct or analogical demonstration, how much greater are the obstacles to retrograde action? the mechanical difficulty to such an action is equal

to that of the physiological, and places its impracticability beyond all doubt.

The merits of this general view of lymphatic circulation rest on nothing assumed, but solely on its internal evidence, which on full and impartial investigation, promises satisfactorily to obviate every objection.*

Founding, then, the *modus operandi* of digitalis on its stimulant efficiency in invigorating the arterial and muscular energy of the system, denying that in retarding the morbid frequency of pulse, it reduces the force of arterial action, and refusing contractility, or an independent absorbing power, to the lymphatics,

* The original claim to this doctrine, or at least that of reviving and systematising it, belongs to Dr. Marshall, teacher of anatomy in London. Upwards of twelve years since, he proposed it in his public course of physiological lectures; and from his superior talents, cautiously exercised in the service of scientific truth, must the medical world ultimately hope for a full exposition of his valuable researches on this interesting subject.

it may be presumed that an adequate explanation of its mode of action may be afforded, by considering it as a powerful narcotic stimulant,* capable of impressing the stomach with additional motive energy, which through associative influence, is propagated over the system, and more particularly exerted on the heart and arteries, by which are distributed to every part of the frame, an increased quantity of oxygenous and other vital principles, which may be necessary to retrieve and establish, both locally and generally, the healthy conditions of life.

On this principle it is obvious that its virtues should be exclusively manifested in diseases of

* The apparent similarity of medicinal effects subsisting between digitalis, opium, hyoscyamus niger, cicuta, and other narcotic substances, justly leads to a suspicion that their respective elementary and constituent principles are more or less analogous, and that their common agency consists in stimulating the motive powers of life, which may prove either salutary, morbidly soporific, or even fatal, according to the degree and mode of excitement produced.

debility, and more particularly in those common effects of systematic weakness experienced in the venous and lymphatic circulation, where a failure of due propulsive power from the arterial and muscular forces occasions redundancy, cellular accumulation, partial stagnation of the reflux fluids, with the various evils resulting from inadequate nutrition, dilution, vitiated excitability and local derangement of structure. There are but few instances of general and progressive weakness, of any considerable duration, in which the cumbrous effects of deficient arterial and muscular energy are not predominantly felt on the venous, exhalent, and lymphatic tubes. But mischief from this cause more distinctly occurs in phthisis pulmonalis, chlorosis, hydrops, lenchorrhea, rachitis, epilepsia, and in short, in most general chronic affections, with local preponderance.

The specific operation of digitalis, seems to pervade every fibre, and to improve the various actions of life; but it is evident, that if its pow-

ers be not applied with much caution to the existing excitability, hurtful stimulation might ensue, terminating in additional debility, indirectly induced.

Its mode of action in subduing the morbidly irritable state of tuberculous concretions* and glandular obstructions, or even in partially or totally dispersing them, is also explicable on the general principle of its strengthening the energies of the circulating system, removing diseased redundancy from the refluxent vessels, equilibrating exhalent and lymphatic transmission, and thus restoring the various motive conditions on which the aggregate efficiency of health depends.

It may be farther observed, that the narcotic

* These tumefactions do not usually originate from altered structure in the lymphatic glands, but from morbid exudation and accretion in the cellular substance, which by enlarging, ultimately involve the adjacent glands in the diseased concretion.

influence of digitalis affords an additional proof of its stimulant property, and corroborates the explanation here offered, of lymphatic circulation. No narcotic effect can be produced without violent previous excitement, by which diseased sensorial actions are generated, become morbidly associated, and prove subversive of the healthy motions of sensibility.

How far an abstraction or modification of healthy mental stimuli may invigorate the energy of animal life, may be questioned, but before that effect can arise, it is probable that the due equilibrium of vital principles must be inordinately shook, and that the effect would be more salutary, were it restrained to its general stimulant agency on the excitability, and not unduly extended to sensibility. On this principle may not the more stimulant narcotics be advantageously employed as succedanea for digitalis in those cases in which it proves either inert or noxious?

Dr. BEDDOES has judiciously suggested the

probability of finding analogous properties in Chamomile and Horehound,[†] since then Broom,* Lakeweed, and Fennel, have been severally proposed as efficacious ; to which, I shall here presume to add the subsequent vegetable productions, as possessing stimulant powers tending to produce, more or less, directly soporific or narcotic effects, and consequently as fit agents for analogical trial.

Common Rue	- - -	<i>Ruta graveolens.</i>
Wormwood	- - -	<i>Artemisia absinthium.</i>
Hop	- - -	<i>Humulus Lupulus.</i>
Garlic	- - -	<i>Allium sativum.</i>
Common Savin	- - -	<i>Juniperus Sabina.</i>
White Poppy	- - -	<i>Papaver semiferum.</i>
Red or wild Poppy	- - -	—— <i>rhœas.</i>
Hemlock	- - -	<i>Conium maculatum.</i>
Woody Nightshade	- - -	<i>Solanum dalcamara.</i>
Deadly Nightshade	- - -	<i>Atropa Belladonna.</i>
Tobacco	- - -	<i>Nicotiana Tabacum.</i>
Black Henbane	- - -	<i>Hyoscyamus niger.</i>
Common Wolfsbane	- - -	<i>Aconitum Napellus.</i>

† Vide Contributions to Physical and Medical Knowledge, p. 539.

* Vide Medical and Physical Journal, vol. 1. p. 383.

Were every vegetable substance that appears to possess properties analogous to digitalis to be enumerated, the list would comprehend all those plants whose active constituent parts are capable of stimulating so rapidly, and strongly, as unduly to exhaust the energy of life, inducing somnolency or a comparatively inactive state of sensorial power.

No risk whatever need be incurred in subjecting these articles to a full trial of their medicinal effects in diseases of debility, more particularly in those in which the lymphatic circulation is chiefly concerned, as in dropsy, phthisis pulmonalis, scrophula, rachitis, chlorosis, epilepsia, &c.

They may be all commodiously exhibited according to circumstances, in the several forms of powder, tincture, decoction, and infusion. They readily impart the stimulant narcotic properties, on which their efficiency principally depends, both to aqueous and spirituous menstua.

When the form of powder is preferred, it should be at first directed in the dose of half a

grain, repeated three times a day, gradually augmenting it, by the addition of half a grain only, until either the pulse be affected, a tendency to sickness be induced, or some effect demonstrative of its agency be excited: when it begins to act locally or systematically, the dose should be kept stationary, or even reduced if at all untoward or inordinate in its operation; by this cautious mode of procedure, every derivable advantage may be ultimately obtained without hazarding any serious inconvenience. These remarks are equally applicable to the other forms—A saturated tincture may be obtained by digesting two ounces of the powder or dried leaves in one pint of proof spirit, in a close vessel during 48 hours, slightly augmenting the common temperature, and occasionally stirring or agitating the contents. Ten drops of this tincture, three times a day, at nearly equal distances, should be commenced with, gradually augmenting the dose as before specified.

The decoction may be made by employing four ounces of the recent plant, or two ounces

of the dry, to one quart of water, boiling it until it be reduced to one pint, of which one table-spoonful may be at first taken three times a day, guardedly encreasing the dose as before particularized.

The infusion may be prepared by digesting four ounces of the recent, or two of the dry leaves in one quart of boiling water, in a close vessel during twenty-four hours; which may be taken as the decoction, and under the same regulations respecting occasionally augmenting and diminishing the dose.

The dose here suggested, may appear inefficiently small for the less active articles, but it should be remembered, that no advantage is lost as to the ultimate benefit obtainable from a medicine by introducing its effects slowly, while noxious stimulation liable to be incurred by applying abruptly or unduly virulent agents, to indefinite constitutional power, may be safely obviated.

Whether medicines operate by imparting any chemical principles necessary to the production

of a specific effect, or act by locally impressing the stomach, or part to which they are applied, with motive changes, which are from thence propagated over the system, is somewhat problematical; but the latter mode seems to be indicated by the highly excitable and sentient properties of the stomach, lungs, and cuticular surface, which are the only media affording direct access to the system.

However this be effected, it is evident that substances have different stimulant or motive powers, according to their mode and degree of physical and chemical agency, and it is not less true, that the strongest and most unfriendly powers to animal life may be so reduced, adapted, and applied, as to prove certainly innoxious, and probably salutary. The whole catalogue of reputed animal, vegetable, and mineral poisons, may perhaps be so modified as to afford the most valuable remedial efficiency.

Nothing in nature is absolutely poisonous to organic life, but every thing is relatively so. Laurel water distilled from *laurocerasus*, in the

dose of a table-spoonful, might operate fatally on a person of the most robust temperament; arsenic also would as certainly destroy in the quantity of one scruple; but each of these active substances, by adequate dilution, and division of their powers, may probably be made to serve important curative purposes, by minutely pervading and stimulating the system;*

* It has occurred to me to find in the course of reading, (since the above was arranged for the press) that a distinguished German physician precisely coincides with the opinion here delivered. Speaking of the fatal effects of undue quantities of poisonous substances, he adds—Im entgegengesetzten Falle ist nun keine substanz so schädlich, dass sie nicht in ganz geringer substanz ohne Nachtheil, und meistens noch als wirksame arznei zum Vortheile in den Körper gebracht werden könne. Man Gebrauchet sublimat, Arsenik, Kirshlorbeerwasser, opium &c. als Gifte, um lebendige Geschöpfe aus dem wege zu raumen: und man wendet wieder eben diese dinge in Geringer gabe an, um thierische Geschöpfe, welche in gefahr schweben, beim Leben zu erhalten.

Was ist also Gift? Was ist arznei? Wo sind die granzen welche arzneikraft von giftiger Eigenschaft unterscheiden?

on the other hand, manna, magnesia, the various dietetic preparations of wheat, milk, potatoe, and such like comparatively mild agents, might be pushed to an excess that would prove as deleterious, and even fatal, as the most virulent of those substances usually, but erroneously, denominated absolute poisons.

The physical elements of matter are so constituted, as to be susceptible of infinite diversity of arrangement, in each of which peculiar motive powers may be evolved, capable of being propagated agreeably to the laws of organic percussion obtaining in animal structure through other substances; by this incessant process of generating and disseminating motive efficiency, the actions of the universe, whether organic

die nehmlichen dinge können, wenn sie in den Körper gebracht werden in einem Falle mit Lebensgefahr drohen, und im anderen die bereits vorhandene Lebensgefahr wieder glücklich abwenden.

Weihard's praktische Anweisung. 8vo. page 374.

or inorganic, are probably sustained and perpetuated; hence, when in the animal œconomy (through morbid degeneracy from the action of health) diseased movements are superinduced, afflicting in their symptoms, and progressively subversive of the powers of life, it is laudable to ransack even the most virulent forms of matter in search for such efficiency as may counteract and retrieve the damages sustained.

The ordinary course of animal vitality is conducted by the inherent motive powers of particular forms of matter termed atmospheric air, and alimentary substances, the effects of which are so absolute, and salubrious, as to have been eternally capable of upholding life, and curing diseases, were it not that maladies occasionally present, which destroy the animal power of duly receiving and assimilating their nutritive properties. In such emergencies, the motive influence necessary to be applied, can only be found in the most powerful agents; thus a decided justification may be claimed for attempting the

cure of hopeless and untractable diseases, by giving adequate trial to the effect of such powers, as promise to retrieve, invigorate, and establish the healthy processes of organic life.

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A P P E N D I X.

(No. II.)

EVERY remedy useful in pulmonary hæmorrhage appears to me, from analogy, to promise to be useful in consumption. The author of the following paper speaks from what he has seen, and therefore deserves a hearing. I by no means, however, vouch for the superior excellence of the preparation he recommends. As little do I feel disposed to guarantee his distinctions, or praise the manner in which he has reported his observations, of which I owe the translation to a friend.

T. B.

*Efficacy of the internal use of the oleum hyoscyami
in hæmoptoe, by Prof. Harles, of Erlangen.*

From HUFELAND'S JOURNAL.

AS it frequently happens that we find ourselves disappointed by the best and most approved remedies, in advanced cases of hæmoptoe—where there is danger in delay, when the symptoms indicate antispasmodicks and antispasmodicks, as well as when they require astringent stimuli—it is hoped that some advantage will be derived from the recommendation of a remedy, which, if administered under proper indications, and not merely used empirically, is one of the most powerful, quickly operating, and at the same time of the mildest of medicines, in those kinds of hæmoptoe which I am about to describe, as I am convinced from

the numerous experiments I have made in the course of more than two years.

The external application of the leaves of the henbane boiled in oil, (*ol. coctum folior. hyoscyami*) was known as an excellent remedy in various painful, inflammatory, and spasmodic cases, and it has lately been recommended as such by *Wendt*. I have not met with any accounts of its internal use, except one single observation of Dr. Wigand's, who mentions the surprisngly quick and great advantage produced by a mixture of the oil of henbane (which was only the less efficacious *ol. seminis expressum*) with a large proportion of opium, which was exhibited internally, instead of being used as a glyster in an incarcerated hernia. This observation, however, was not conclusive, on account of the quantity of opium with which the oil of henbane was combined. Dr. *Wendt* says he has not yet tried to exhibit the oil of henbane internally; but that he should try very small doses of it in hæmoptoe in case the oil of momordica should fail of its effect. I

rejoice in being able, by this communication, to corroborate the suggestion of that celebrated physician.

I shall not enter into the detail of an enquiry concerning the virtues and effects of henbane, but refer my readers on that subject to the experiments and observations of other physicians, particularly those of Dr. Hufeland.

It is certain that henbane deserves one of the first, if not the highest place among the less irritating, properly narcotic, and anodyne remedies, which are calculated suddenly to reduce excessive irritability. It produces no heat, and accelerates scarcely, if at all, the action of the vessels. It excites no orgasm, and gives rest more directly than opium, which is a stronger and more penetrating stimulus, without producing, as a secondary effect, so high a degree of debility as that which, under similar circumstances, would result from opium.

On this account the extract of henbane is an

excellent remedy, and superior to every other, in all cases where excessive irritability of the nerves and muscular fibres, with spasmodic, irregular, violent and rapid action of the blood-vessels, or excessive secretions, or derangement of secretions from crethism or spasm are to be obviated. Even the proper sthenic state, and true inflammation, when they are not too violent, but however, such as render even the slightest momentary irritation improper, are not indications against the use of the extract of henbane, but may, under certain circumstances, become an indication for it. A more important and general indication against this remedy is true debility, with equally diminished or exhausted excitability, or Brown's *indirect debility*, and paralysis of the irritable and sensible fibre. Under these circumstances henbane increases the debility in a high degree, particularly in the nervous fibre, renders it torpid, palsies the already enfeebled action of the vessels, produces asthenic congestions, impedes and stops the secretions on one hand, whilst on the other

it promotes the evacuations, particularly hæmorrhages, when they are passive or asthenic ; and particularly as it seems to increase the relaxation and want of excitability in the veins. These benefits and disadvantages however, depend in a great measure upon the doses, and the duration and frequency of its use. With regard to the doses, it appears that they must be increased according to the distance of the country from the south ; the dose in the southern parts of Germany being from two to five grains, in the northern parts from eight to ten, and in Sweden even so much as half a drachm. These observations are not derived merely from theory, and assertions of others, but immediately from my own experience, for I have exhibited henbane for a great length of time, perhaps too frequently, and with a predilection which I have now discarded, but with the advantage of having obtained a more accurate discrimination in its use.

These general observations are particularly applicable to hæmoptoe, a disease which may

proceed from a great variety of causes, and may therefore require a variety of methods and medicines. But the greater number of cases of hæmoptoe (excepting those which proceed from the corrosion or bursting of some of the larger pulmonary vessels, or from their mechanical laceration) may be divided into two principal classes, according to the state of the blood-vessels, and that of the irritable fibre as its proximate cause.

1. Hæmoptoe, from excessive irritability, excitement, and the more or less spasmodically accelerated action of the pulmonary blood-vessels, and particularly the arteries, by which the blood is accumulated in the veins, and forced out into the aircells, not unfrequently attended with laceration of small vessels, chiefly veins, and scarcely ever of any arteries.

2. Hæmoptoe, from excessive diminished irritability, excitement and action of the vessels, but particularly from the excessive debility and relaxation of the veins, with a kind of paralyti-

cal distention, and ultimately bursting of their thin distended membranes ; sometimes also (and particularly in causes of suppuration) from erosion.

Blood-spitting of the former kind might not improperly be called *sthenic*, and that of the latter *asthenic* hæmoptoe. It is of practical importance to observe, that in the first species there is always increased excitement, and for the time, increased action ; but not always increased vital strength, *i. e.* a connection of a proper, and even more than usual degree of tone and duration of energy, with increased excitement and irritability. On the contrary, the state of the vessels in regard to the first condition, is often rather (physico material) debility, which, however, is not so considerable as to prevent an excessive increase of excitability and excitement, and thence arising, temporary increase and acceleration of action of the vessels, even to an excessive degree, proportionate to the excitement. The smaller the tonic strength

and lasting energy of the vessels, the greater is their excess of irritability; the more violent and rapid the impulse of the excitement, the shorter will be the excitement and the increased and accelerated action of the vessels, and true and perfect debility (*i. e. indirect debility*) will so much more rapidly succeed the paralytic state of the vessels.

The denomination of *sthenic hæmoptoe*, therefore, can be admitted to denote the former kind of blood-spitting only when the words *sthenia* and *sthenic* mean a state of increased excitement, without supposing always true perfect energy (*robur*) to be a necessary condition, as clearly appears to be required, by the definition of Brown, and his mode of using the expression. This, I conceive, points out a great defect in that profound system, the non-distinction between (pure Brunonian) *sthenia* and true energy; it shews the want of the idea of *excessive energy*, (*robur nimium*), an idea which is certainly founded in nature as opposite to true, perfect debility; and it amounts to a total

omission of a circumstance, highly important in pathology. True (excessive) energy always necessarily supposes (Brunonian) *sthenia*; but not *vice versa*.

Hæmoptoe of the second kind, which in many respects may be compared to the passive piles, is, on the contrary, always passive on asthenic. So much for the necessary theoretical preliminaries.

It is hæmoptoe of the first kind that, according to my experience, chiefly indicates the use of henbane. It has been demonstrated that this remedy must be noxious in the second species, by increasing the hæmorrhage; and that this is actually the case, has been proved by accurate experiment. In cases of the first kind, the efficacy of the extract of henbane has been proved by the experience of many physicians, as well as my own; many cases of that kind having afforded me opportunities for the experiment. Yet I have often met with cases of urgent danger, in which the effect of the extract would not have been sufficiently sudden and

powerful, or cases where the excessive irritability would not allow of its use on account of the irritation, which, however slight it may be, is always produced in the first moment of its operation. In these cases I wished for a preparation of this remedy, which should satisfactorily answer both these purposes, and I think I have found it in the oily decoction of the henbane leaves. In this I calculated upon the combination of the narcotic, sedative virtues of the herb, and the still more mild and relaxing powers of the oil. In order to increase the effect of the latter, and to render the remedy more applicable to cases of the most excessive irritability, I commonly added to the oil of henbane, twice its quantity of pure oil of olives, or almonds. My opinion of this medicine has since been confirmed, by successful experiments in more than fifteen cases of the first kind, although I have met with other cases in which it had no efficacy, and was immediately discontinued, when it appeared inapplicable. The spitting of blood was very frequently

stopped, without a relapse, by the first doses; and whenever it returned, which sometimes was occasioned by accident, it was as readily arrested as before. In some cases, however, it was necessary to prolong its use. I commonly exhibited it afterwards in conjunction with other proper medicines, and very often with the extract of henbane in a mucilaginous mixture; but the oil was always exhibited by itself at first. Bloodletting was occasionally indicated at the same time. But upon the whole I find that this is seldom requisite in the hæmoptoe of the common character, which I met with. A slight degree of fulness about the head, and giddiness, which commonly appear after the remedy has been taken for a certain time, and to a certain extent, do not induce me to suspend its exhibition. I usually prescribe one part of the oily decoction of the leaves, (which is in all cases more efficacious than the oil expressed from the seeds), with two parts of oil of olives, or that of almonds, of which three or four tea-spoon-fuls are to be taken twice,

and rarely oftener than three times a day. The mode of preparing the oil is to boil two ounces of the fresh leaves of henbane bruised, in eight ounces of pure oil of olives. The simple infusion of the herb in the boiling oil, would be undoubtedly more efficacious; but also more expensive.

A P P E N D I X.

(No. III.)

*On the use of certain external applications in
consumption.*

IF medicine had not been practised so blindly, and so much at random, it might appear astonishing that we have no body of experiments sufficient to determine the absolute and comparative merit of rubefacients, blisters, and issues upon the chest. Cough, with pain, is sometimes relieved; at others very distinctly aggravated, by both temporary and perpetual blisters. Where the distress of the patient has appeared to arise from an affection of the mucous membrane, a blister has often removed it

for a long time, and has alleviated deeper pains. But hitherto this superficial application has feldom indeed, under my observation, contributed to remove the disease, by effecting the dispersion of tubercles. The happy effect of issues in disorganizations, nearly as far below the common integuments as tubercles are sometimes seated, led me to hope more from their use. And it is of them that I mean to speak particularly in this place.

CASE I.

MR. GLEDSTONE, gardener to the Marquis of Bath, was lately placed under my care. He had the phthifical conformation, and every symptom of tubercles, recently advanced to a state of suppuration. His breath was short; his cough frequent and hard, with some expectoration, partly purulent. He had chills, heats, and night-sweats. For six weeks before I saw him he had had an almost constant fixed pain in his left side, which the cough greatly aggravated.

The medicines he took moderated the hectic fever;—the pain in the side, however, continued for some weeks, equally distressing. I recommended a large caustic immediately over the pain.

Very soon after this began to discharge, the pain decreased, and then disappeared altogether.

What renders the effect of the caustic more striking is, that neither medicine, nor sailing have done any thing beyond checking the rapid course of the complaint. The other symptoms have occasionally returned with their original force. But of the pain in the side, nothing has been felt since its removal, soon after the issue began to discharge ; *i. e.* for near three months.

CASE II.

MRS. WAKE, of Market-street, Westminster, with fair complexion, light hair and eyes, applied to me, in a state so deplorable, that it would be difficult to give any adequate idea of it by words. She had been complaining of severe cough and feverishness for above a twelve-month, and seemed to have been for many months in a confirmed consumption. Her shiverings occurred daily, and were extremely severe. The succeeding hot stage was equal to the cold in violence. But it was a peculiarity in this case, that the patient was entirely exempt from perspirations. Great part of the night, and much of the day, were spent in hard coughing; and the quantity of fetid matter regularly expectorated, was very great. The breathlessness, even without exertion, was at times alarming. There had been a considerable de-

gree of fixed pain near the edge of the ribs, on the left side. Of this the patient complained much.

After some days exhibition of camphorated tincture of opium, with compound spirit of aether in hot water, at the outset of the cold fit, by which the hectic paroxysm was always stopped: as also of digitalis, in tincture, by which very little impression was made on the cough and expectoration, and none at all on the pain, I proposed a caustic to the part. The proposal was adopted. The cessation of the pain soon followed the establishment of the issue. The tincture of digitalis and squills were at this time administered, half a drachm each, to about five drachms of compound spirit of aether with spicy tincture. The dose of this mixture was forty drops, thrice a day. A tea-spoonful, thrice a day, occasioned sickness and bilious vomiting, though the quantity of tincture of digitalis in this mixture was so very inconsiderable.

The patient, in ten days, reported herself

better in all respects. Her cough was abated ; having had no accession of fever, she had required no medicine to stop it. She could now walk up two pair of stairs without much breathlessness ; whereas, before, it had been a painful effort to ascend a single pair. The pulse had become natural ; the appetite was good, and the strength increasing.

The terrible situation in which I had at first found the patient's health, gave me a distrust of these flattering appearances. But at every succeeding visit I received the same accounts ; and at the end of a month I find the expectoration reduced to a twentieth of its original quantity, while the patient declares herself well.

If, as there seems every reason to hope, a perfect recovery should take place, it will be an encouragement to exertion, in the most desperate states of this desperate disease. And the circumstances seem to shew, that the issue has very powerfully co-operated with the internal remedies.

CASE III.

IN this case the effect of the caustic seems unquestionable :

Mr. JAMES PALEY, son of the moral philosopher of that name, after suffering from undefined indisposition and constant languor, was seized, in August, 1800, with a pain under the sternum. In the latter end of September this pain became sudden and violent, and acquired, from the patient, the title of *spasm*. His strength decreased, and a short dry cough came on ; and regularly grew harder and more frequent. In November he was sensible of a pain in his right side ; and in December in his left. The pains were fixed, and went on increasing.

Mr. J. P. had, by the end of the year, a pulse at 110 ; chills, succeeded by heats and

night-sweats. His flesh and strength were much wasted, and his breath was very short on exertion :—such was his state on his arrival at Clifton, in January 1801.

The digitalis very soon reduced his pulse to the natural standard. The hectic fever gave way under its use. The night-sweats became less frequent and profuse, and in March ceased altogether. The progress of debility and emaciation was also arrested.

The cough was somewhat lessened at the same time ; but it was still harsh, and increased the pain. Considering how fixed this was, and apprehending great difficulty in restoring the disorganized parts to their natural condition, I proposed and easily obtained the patient's consent to apply a caustic.

In the reduced state of the patient's flesh, injury to the bone was feared if it was applied over the sternum, where the pain was most considerable. The pain in the right side was the next in severity ; and here the caustic was fixed. In a month afterwards the pain was

less. In seven weeks it was gone ; while the other pains, though considerably diminished, as the patient's health improved, were still very sensible ; and that on the left side, originally the slightest, continued. The distance of the seats of the pain, and the distinctness of each, rendered our observations particularly clear. That on the right side was between the sixth and seventh rib, at least seven inches from that below the sternum ; and the pain in the left side almost as far off.

When the right side was easy, a perpetual blister was opened on the sternum. But this aggravated the cough and pain, particularly on the fresh application of blistering ointment.

Towards the end of April the hectic fever being gone ; the patient's arm had gained an inch in circumference ; and his strength had recruited with his flesh. But the pain and the cough, which both seemed to arise from the same morbid alteration of structure, were still considerable enough to make me apprehend a relapse, if they were not quite removed. To

prevent this, a caustic has been applied, partly beside, and partly on the sternum. Under the immediate action of the caustic, the pain below increased, (as it had done from the blister, but in a greater degree.) This increase of internal pain appeared to arise from sympathy with the skin. But a remarkable association was observed during the action of this second caustic. The pain of the right side returned, though it had not been felt for some weeks before, and has not been felt since. I doubt not but that if this pain had been referred to a part amputated shortly before the application of the last caustic, the associated pain would have been equally felt.

The caustics have had a probable good effect in a sufficient proportion of cases, to recommend them, whenever the phænomena point out the site of tubercles. Their application may determine the dispersion of these morbid productions, when it is not practicable by medicine alone ; or if it is begun in one spot by caustics, it may follow throughout the lungs,

from the joint effect of sympathy and internal remedies.

As it is desirable to choose the most lenient among efficacious means, a perpetual blister may be first tried. But I apprehend, that as these applications do not act altogether upon the same principle, the issue will succeed where the superficial irritation will be unavailing, and reciprocally.

A P P E N D I X.

(No. III.)

SINCE these sheets have gone to press, one of the most distinct possible cases of confirmed consumption has occurred to me, in which the increased force of the pulse, and not any increase of frequency, has marked the exacerbation of hectic fever. The patient, the Rev. ANTHONY E. HAMMOND, permits me to authenticate the observation with his name.

Mr. H. who bore every mark of having enjoyed a robust constitution, and indeed observed himself, that in his time there was not a stouter man in the University of Oxford, informed me, that about ten months before our first interview, his wife had died of consumption; and that nearly at this period he had begun to ex-

pectorate the same kind of matter which he at present does. This matter was truly purulent; in all respects such as many other persons, in confirmed consumption, expectorate. Several medical persons beside myself, inspected it, and could not hesitate about this fact. He complained of cough, loss of strength, and rapid emaciation. His pulse was 73, regular and firm. He told me that several practitioners, misled by this circumstance, had judged his complaint to lie in the abdomen, and had prescribed bitters and chalybeates, without desiring to see his expectoration. There was, undoubtedly, a disease of the liver also; that viscus could be felt enlarged. But the appetite being perfectly good, and no symptom of indigestion occurring, the quick decrease of his flesh and strength could not be referred to the disorder of the liver, which might have gone on for years, with slight inconvenience. But the patient was likewise hectic. He had evening chills, heat, and night-perspirations. In the evening too, the momentum of the pulse

was considerably augmented. It became full, strong and bounding. But in frequency there was no difference; and probably it did not exceed the healthy rate.

Mr. H. suffered much from shortness of breath. Yet after walking up two pair of stairs, an exertion which rendered respiration exceedingly laborious, I have not found his pulse increase above three strokes in a minute.

What it is that sometimes prevents the heart from sympathizing with the ulcerated lungs, even when the skin does, must, I am afraid, lie in obscurity at present.

I have made the observation as I relate it in Mrs. Finch, constitutionally one of the feeblest subjects imaginable; and in Mr. Hammond, of a habit exactly the reverse. I had remarked the same thing before; but I did not examine the particulars so curiously.

CONCLUSION.

THE novelty and importance of the vaccine inoculation, have rendered it the first object with our medical observers. The second has been the power of digitalis in consumption, a proof, if proofs were wanting, of the universal prevalence of this hitherto fatal disorder. The investigation has been productive of valuable accessions to our knowledge. But if many have been careful duly to ascertain the facts they have recorded, others were too ready to fall into the temptation offered by the increase of those opportunities for publication, which, bringing good seed and dung into constant contact, will, upon the whole, invigorate medical literature. Some reporters seem to

have made up their papers under the full mercantile apprehension of being too late for the post.

I hope that the contents of the preceding pages will not incur the danger of being confounded with crudities, hastily cast before the public. The symptoms and the dates of the principal among the phthifical cafes speak for themselves. Indeed, where the complaint is not clear, and where the patient has not continued well for some time, I shall neither give credit, nor should I think it due, to any anti-phthifical remedy. Allowance, however, must be made for imprudence and accident. Mental distress I have known most cruelly to impede the full establishment of health, after it had been partly restored. Physicians cannot be well expected to put the vital organs, after they

have once been dangerously affected, into better condition than while they were quite unimpaired. If, therefore, the same course is pursued, or the same hardships press, as those in which the disease originated, let us vent as many reproaches against fate or folly, as we please: but what have such untoward occurrences to do with the character of a remedy? Does any one expect mercury to secure a rake against infection upon his return to the stews? Or, if we choose to distinguish between a substance that will heal diseased organs, and one that will likewise render them unsusceptible of disease, let us take care how we discard the former, till we are in possession of the latter.

Having, however, been disappointed, in some instances, by the return of the complaint, where it seemed nearly gone, I

require an interval of health before I dismiss a patient from my thoughts as cured. I repeat this rule, because I have related some cases, either recently or not yet completely terminated. The attentive reader, however, will have observed, that I relate them to illustrate some particular point ; and I hereby apprize the inattentive, that these cases are to be considered as restricted to their immediate purpose, and not to be extended beyond it. In that most interesting case, for instance, related in a note to page 182, where digitalis appeared so superior to mercurials, and so unexpectedly salutary, I have no security that it will complete what little seems to remain undone. In like manner Master Pattison's case may only exhibit a cure of incipient phthisis by digitalis ; and even a failure of that and all his other medicines

in *tabes mesenterica* ; in this point of view it is instructive enough. Whatever shall occur in either instance, will not be concealed. I shall not wilfully exaggerate or extenuate. If the physician informs himself as fully as the means of the time in which he lives will allow, and applies his knowledge properly, he will have done his utmost. He is not responsible for any apparent traits of the stepmother in nature.

That I may now fulfil the stipulation of telling the truth, as far as I am myself acquainted with it, I introduce in this place the latest intelligence I have received concerning Mrs. Finch.

Since this lady's note of March 29, which may be read at page 57, I have received accounts at various times of the

state of her health. On the 21st of April, she says, " For these few last days my bright gleams of ease have been taken up by riding out, and by interruptions, which I still hoped would not occur on the morrow. I am certainly getting better of my spasms; but my breath is very indifferent indeed at times, especially if, by sickness or coughing, I have not freed my lungs from a clear viscid phlegm. This, when I cough, I often bring up, with specks, like matter, rather larger than pins' heads — sometimes four or five specks, about the size of split pease, two or three times in a day. I then, perhaps for a day or two, spit only phlegm. I try ether, and all the routine of warming medicines, without effect. My expectoration is less than three weeks ago."

Mr. Barr informed me, April the 25th, " That Mrs. Finch had suffered much

from sickness, difficulty of breathing, and violent spasmodic pains in the stomach."

May 10, Mrs. Finch gave me an account of her being really better, and gathering strength. " I feel, says she, so much benefit from the warm gleams of sunshine, that I look forward to summer as a certain restorer."

Of the patient, whose case is numbered IV. p. 65, I have lately received the most favourable general account. If his health should be finally confirmed, he will have been indebted to his winter confinement for this benefit.

I have just seen the person who wintered with a hot-bed beside him. He continued well after his release ; and passed the last winter tolerably, but not with so much freedom from cough as he had done the preceding in his confinement.

These and other patients went abroad too soon to escape the unkindly east winds of spring, 1800. Yet it does not appear that they, in any degree, suffered from them, a fact which indicates that confinement in a high temperature does, for a time, render innoxious those variations of our climate, which are, in the long run, so destructive to the weakly.

It might be a question, whether warmth proves beneficial to certain phthifical invalids, in any degree by virtue of its effect on pulmonary ulcers. That the cow-house exhalations operate in this way, I can hardly doubt; and I sometimes observe æther-vapour instrumental towards the cure of consumption.

Of the only two conceivable ways of healing phthifical ulcers, viz. by direct impression, or by a change propagated

from another organ, in other words, by local or constitutional agency, I have no doubt but both have succeeded. But I am persuaded that a local agent, if the means of applying it, could be discovered, would be more efficacious, particularly in the confirmed consumption of feeble subjects.

It is questioned by some, whether a local action would be sufficient to cure phthisis. But when it is remembered how speedily the constitutional symptoms cease upon the change of condition in a foul ulcer, or upon its removal, this opinion cannot, for a moment, hold its ground.

Mr. B——, of Dorchester, was for some time affected with violent cough, pain in the chest, purulent expectoration, emaciation, and compleat hectic fever. One day a severe coughing fit caused him to eject from the lungs a calculous substance hav-

ing the appearance of a thin plate of white-wash that has been peeled off from a cieling. From this moment the chest became easier, the expectoration regularly diminished, the cough declined, the hectic fever went off ; the patient recovered, and has continued free from pulmonary complaint. This is a sufficiently clear instance of recovery from *phthisis pulmonalis*, in consequence of a local change. And I anticipate in imagination a great improvement in the treatment of the disease, from this source.

Other improvements will arise, as the subject is studied. In that variety of consumption, for example, of which I have spoken at page 184, the nearest possible approach to a state of absolute quiet, will, perhaps, be productive of benefit. I am sure, at least, that the propriety of taking

air and exercise is not so universal as the prejudice in favour of it. In debilitated females, labouring under symptoms, termed *nervous*, I have been able to effect a cure by the very medicines, under confinement, which were before ineffectual. In many circumstances the physician will be able to discover, on examination, that more is lost than gained by the slightest exercise.

Urgent as the terrors of consumption are, both patients and physicians (one flinching from present pain, the other from the odium of inflicting it) unwisely acquiesce in half measures. Hence the signals for the application of irritants to the skin and their merit remain to this day unsettled. The caustics applied under my direction did not exceed $1\frac{1}{4}$ inch in diameter; and from what is experienced in

curvatures of the spine, I suspect these would fail, where larger and more numerous would succeed. And I hope that some one, by speedily resolving this doubt, will deserve well of humanity.

The comparative efficacy of the severe and mild operations of digitalis, is likely to remain unknown for the same reason as the benefit of extensive caustics. It has been very prematurely laid down by some, that the severe operation is always to be avoided. But I see no reason why the lungs should not sympathise with that powerful excitation of the liver, which strong doses of digitalis occasion. My experience, and that of others, and the strong analogy of sea-sickness favour this practice ; where the other, which is doubtless preferable, does not answer, and where it can with propriety be followed.

The most beneficial improvement is that which, if I mistake not, is taking place in the judgment of those who have the charge of youth. The state and constitution of persons liable to consumption being more universally understood, there will be less delay in seeking the means of health ; and whatever difference of opinion may exist concerning the proportion of recoveries from incipient phthisis, and the practicability of a cure in the confirmed stage, (of which I do not harbour a doubt) it is acknowledged, that previously to ulceration, the chance in favour of a patient is now become very considerable.

To assert that scrophula and consumption may be exterminated from a country where they so generally prevail, would be ridiculous. Privation secures these dis-

eases to one class of families, inexperience and ignorance to another. The most inconceivable supineness, and the weakest indulgence, sometimes prevent the children that remain from profiting by the warning which parents have received from Death himself.

As intellectual impediments to the enjoyment of health, and the prolongation of life, are progressively removed by well adapted popular writings, the mortality from scrophula and consumption in families, sufficiently supplied with food, fuel, and cloathing, will immensely decrease. We have correctives adequate to the evil; and it is but to use them seasonably.

The hope, that I might be essentially contributing to extend the knowledge of these precious remedies, and of the season for using them, has supported me against

fatigue and indisposition, whilst I was arranging the tract, to which I now put the last hand. What I found principally irksome was the repetition of the commonplace diagnostics of phthifical disease. In truth, to frame or follow many descriptions of cases according to this model, can generate none but disagreeable feelings in that mind which seeks to penetrate into the interior of the animal oeconomy, and to detect the hidden connection of its movements. But however vicious may be the style and manner of our shallow, vulgar nosography, I did not think this the place for attempting corrections. The necessities of the sick and the sickening are urgent: so, therefore, must be those of their medical attendants. And though an account of stages and roads can afford

no satisfaction to the enquirer into the condition of a people and its causes, it may much expedite the traveller, whom business impels in the same direction.

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* This day, (May 24) I have seen a patient, who, after much watchfulness and vain use of opium, has enjoyed a

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N. B. Has remained well, according to a letter, dated May 18, which came too late for insertion. “Respecting J——— I can give you no
“additional information. He is now perfectly
“well, and better looking than I have ever
“before seen him.

“W. Y.”

ERRATA.—p. 7. l. 7. dele *other*.

———p. 201. l. 14. f. *was*, r. *were*.

———p. 267. l. 5. for *taeniae*, r. *lumbrici*.

———In Dr. Kinglake's paper, p. 17. l. 21.
f. *determent*, r. *determinent*.

———p. 17. l. 23. f. *hydrologia*, r. *hygrologia*.

———p. 40. l. 15. *spoonfuls*, r. *spoonsful*.

———p. 49. l. 18. f. *refugete*, r. *refugere*.

———p. 66. l. 9. f. ——— r. *suck*.

———p. — l. 10. f. *which*, r. *as*.

———p. 67. l. 17. f. *lenchorrhea*, r. *leucorrhœa*.

———p. 70. l. 9. f. *gravolens*, r. *graveolens*.

———p. — l. 12. f. *semniferum*, r. *somniferum*.

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